MONTHLY WEATHER REVIEW.

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Climatological Data for October, 1910.
DISTRICT No. 1, NORTH ATLANTIC STATES.

WILFORD M. WILSON, District Editor.

GENERAL SUMMARY.

The month of October, 1910, was unusually warm throughout the district. The percentage of sunshine was high, and, with the exception of the tropical storm that passed along the Atlantic coast, causing heavy rains in parts of Virginia, Delaware, and New Jersey, the month was characterized by more than the usual freedom from stormy weather. The temperature was practically everywhere above normal, the average daily excess ranging from 1.2° in New England to 3.9° in Pennsylvania. In the central part of the district the month was the warmest October in the past 10 years, except October, 1908, which was the warmest on record generally. The precipitation was unusually scanty, averaging only about 40 per cent of the normal amount, except over a limited area that came within the influence of the tropical storm. The effect of the scanty rainfall was most pronounced in the southeastern part of New York, where the water supply for household purposes and for cities became a matter of serious concern. Springs and wells that were never before known to fail went dry. Mr. John W. Sly, Cooperative Observer at Warwick, Orange County, states that the water supply in that region was the lowest to his knowledge in 40 years. This condition is the culmination of the continued scanty rainfall in that section extending over a period of from 4 to 6 months, during which less than one-half the normal amount of rain occurred, and is, perhaps, considerably intensified by the general deficiency of precipitation that characterized the past two seasons. Reports from many parts of the district indicate that the ground water is exceptionally low, the soil dry, and that general and continued rains are needed to restore normal conditions.

TEMPERATURE.

The average temperature for the district was 56°, which is about 3° above the normal, and ranged from 51° in New England to 60° in Virginia. The month takes rank among the warm Octobers, and, in this respect, is in marked contrast with October last year, which was among the coolest Octobers on record. The departure from the normal was greatest over the central and southern parts of the district, and decreased gradually northward, the monthly average being normal or below in northern Maine and New Hampshire.

The most pronounced warm period of the month extended over the first 6 days, the highest temperatures occurring mostly on the 1st, 5th, or 6th, and generally exceeding the usual maximum temperatures for the month of October. Temperatures of 90° or above occurred at numerous stations in the southern part of the district on the 1st, the highest being 93° at Lincoln and Woodstock, Va., on this date. The 1st was an unseasonably warm day over the entire district, with the temperature generally above 75°, except in the northern part of New England and the more elevated parts of New York and Pennsylvania.

Slightly cooler weather followed on the 3d, but with the passage of an area of low pressure eastward down the St. Lawrence Valley during the 4th and 5th, causing strong southerly winds, a rapid rise in temperature occurred, culminating, on the 5th and 6th, in the highest temperatures of the month for the northern part of the district. At many stations in New England and New York the temperature on these dates ranged from 80° to 85°, and at a few points it was as high as 88° or 90°. In Pennsylvania and New Jersey the maximum temperature at one or more points on these dates reached 90°. The usual cool period followed the extreme heat, the fall in temperature in the 24 hours following the 6th being generally more than 20°, except along the coast where the change to cooler occurred about 24 hours later. The weather continued cool for several days, with the lowest temperatures occurring generally on the 13th, when freezing weather was general over New England, New York, and parts of Pennsylvania and New Jersey. The first destructive frost in the interior of the northern part of New Jersey occurred on this date. Moderate temperatures prevailed until near the close of the second decade, when a very sudden change to warmer occurred in the northern part of the district, followed on the 20th and 21st by an equally sudden change to colder.

The chief cold period occurred during the closing days of the month, when temperatures of 10° to 20° below freezing were common in all parts of the district. This cold period was remarkable for the exceptionally low temperatures for the season that occurred even in the extreme southern part of the district.

PRECIPITATION.

The average precipitation for the district was 2.49 inches, which is about 0.75 inch below the October normal, and ranged from 1.56 inch in Pennsylvania to 4.33 inches in Virginia. This uneven distribution was due mainly to the heavy rains that resulted from the tropical storm that passed up the Atlantic coast on the 20th, its effect, as far as precipitation is concerned, being almost entirely confined to the coastal region as far north as Nantucket. For the remainder of the district, the precipitation was generally less than half the normal amount, and the distribution was fairly even.

With the exception of light and scattered showers over New England on the 1st and 2d, fair and pleasant weather prevailed until the 7th, when a period of unsettled weather with moderate rains set in, which continued through the 8th and 9th. Light and scattered precipitation occurred in the northern part of the district on the 15th, but, with this exception, the second decade was one of fair weather.

During the 20th a tropical storm passed up the coast sufficiently near to cause excessive precipitation at most stations along the coast. Excessive precipitation (2.50 inches or more in 24 hours) was reported from 28 stations on the 20th. At New York City the total rainfall for the month was 3.79 inches, of which all but 0.75 inch occurred within 24 hours on the 20th; at Seaford, Del., the total for the month was 8.26 inches, 5.47 inches of which fell in 24 hours on the 20th, while at Porto Bello, Md., nearly three times as much rain fell on the 20th as occurred during the remaining 30 days of the month. While loss of life and property occurred from this storm during its passage over Florida and the Southeastern States, its track lay too far eastward to cause serious damage in this district, except such as was occasioned by the excessive precipitation in some localities where streets and cellars were flooded, bridges washed out, and such other minor losses as are incident to rains of this character were sustained. For the remainder of the month the rainfall was generally light and scattered, except in the northern part of the district, where moderate amounts occurred on several dates.

RIVER CONDITIONS.

The precipitation of the month was not sufficient to maintain even moderate stages in the rivers of the greater part of the district. Only in southern Maryland and in Virginia did the streams remain at anything like the usual stage. The rivers were lowest from the 16th to the 19th, or at the close of a rainless period of about two weeks. At this time the stages recorded were near or below the low-water mark in many parts of the district, especially in the Delaware system.

SUNSHINE.

The average percentage of possible sunshine for the district was 62, which is higher than that for either August or September

of this year. There was more than the usual variation in the amount of clear weather in different parts of the district. At Eastport, Me., and Hartford, Conn., the percentages of possible sunshine were, respectively, 40 and 45, while at Baltimore, Md., and Mount Weather, Va., the percentages were 74 and 76. The average number of days with 80 per cent or more of possible sunshine was 14, and with 20 per cent or less, 7.

EFFECTS OF THE ERECTION OF NEW AND HIGH BUILDINGS ON THE RECORDS OF WIND VELOCITY AND DIRECTION AT THE NEW YORK WEATHER BUREAU OFFICE.

By E. S. NICHOLS, Local Forecaster, U. S. Weather Bureau.

On October 16, 1898, the wind-recording instruments of the U. S. Weather Bureau station in New York City were moved from the Manhattan Life Building to the American Surety Building, which is situated on the southeast corner of Broadway and Pine streets, one-half mile from the southern end of Manhattan Island and about 1,100 feet east of the Hudson, or North River. Fig. 1 shows the details regarding the location of that and other buildings in the vicinity. With the exception of Trinity Churchyard the entire district shown is, and was at the time of the removal, compactly built up, many of the structures being "skyscrapers." On May 14, 1900, the anemometer and windvane,[1] which up to this time had been exposed on special supports placed on the roof, were moved to the summit of a steel tower near the southwest corner of the roof, where they have since remained. The anemometer is 45 feet above the roof, 350 feet above the street, or 387 feet above sea level, which is practically the level of the Hudson River.

For a few years at the beginning of the record on the American Surety Building (which is 21 stories in height, only about 85 feet square, and built on one of the highest plots in the vicinity), this structure towered above others in its immediate vicinity, the air currents had free sweep, and high velocities were recorded. The prevailing winds (northwest and west) were least retarded as they came freely from the Hudson River, which is a mile wide at that point; other winds were more retarded by buildings, the tallest of which were most numerous to the southward. Beginning in the summer of 1902 with the erection of the Hanover Bank Building only 105 feet distant to the east-southeast, there have been put up a number of "skyscrapers" that might reasonably be expected to modify the wind record; nearly all of the important ones, from our point of view, were completed before 1908. Fig. 1 shows the locations of these buildings and several others of special interest; while Table 1 gives the height of these buildings above the street, and above sea level (close approximations in some cases). Figs. 2 and 3, views from the Hudson River, taken in 1901 and 1908, respectively, give an excellent idea of the changes that have taken place in the surroundings during that period. From Table 1 it will be seen that the Singer Tower, the City Investing Building Tower, and the Liberty Tower are the only structures close at hand that project above the level of the anemometer; and that the Hanover Bank Building, the tower of the Manhattan Life Building, and the Trinity Building Tower (a small affair) are the only others in the vicinity that reach the level of the roof of the American Surety Building. But all the buildings listed, and many others to a less degree must have their effects, direct or indirect, in deflecting the air currents at the anemometer level and retarding them by increasing their turbulence, and especially by producing vertical components of motion. The pattern of instruments used and other conditions at the office building having been constant, any change in the record not due to actual variation in the velocity of the free air currents must be ascribed to changed surroundings.

[1]Standard Weather Bureau anemometer recording each mile of wind movement and wind vane with attachments for recording each minute the direction to 8 points of the compass. The anemometer in its later position is attached to the axis of the vane, directly above the latter.

TABLE 1.—*Tall buildings erected since the summer of 1902.*

Key to fig. 1.	Building.	Height in feet. Above street.	Above sea level.[1]
1	American Surety (Weather Bureau Office. X, Instrument Tower.)	305	342
	NEW BUILDINGS. (Shaded areas on map.)		
2	Hanover Bank	329	363
3	Singer Tower	612	646
4	City Investing (Main Tower.)	486	513
5, 6	Hudson Terminal	277	303
7	Trinity Building, Main part	280	317
	Trinity Building, Tower	350	387
8	United States Realty	282	319
9	Fidelity and Casualty	251	280
10	Commercial Cables	317	337
12	60 Wall Street	346	368
13	West Street	315	320
14	United States Express	302	323
15	Liberty Tower	401	435
21	Wall Street Exchange	318	342
	OLDER BUILDINGS.		
11	Broad Exchange	279	294
16	Manhattan Life (New Street side)	268	292
	Manhattan Tower (above Broadway)	355	390
17	Empire	283	318
18	Gillender (recently demolished)	248	272
19	National Bank of Commerce	270	306
20	Washington Life	286	321

[1]Close approximations in some cases.

It is our purpose to investigate the modifications of the record that have taken place since the period of free exposure. Fig. 4 shows, graphically, for each year since 1898, the number of days with winds of 40 miles per hour, or more, at the Weather Bureau stations at New York City, Block Island, R. I., New Haven, Conn., Atlantic City, N. J., and Philadelphia, Pa. Fig. 5 gives, graphically, for each month and year from 1899 to 1909, inclusive, the average hourly wind movement at the above stations and at Central Park, New York City (New York Meteorological Observatory).[2] The elevations at Philadelphia and Central Park remained constant during the period. The sharp drop in the lines for Atlantic City between 1901 and 1902 is coincident with a reduction in elevation at that station. The instruments at New Haven and Block Island have been moved; in the case of the latter they were lowered, but the exposure has been very good during the entire period. Even without allowing for reduced elevation at Block Island, figs. 4 and 5 show a pronounced decrease in the winds at New York with respect to those at the other stations. There is an actual decrease in hourly wind movement from an average of 14.7 miles for 1900, 1901, and 1902 to an average of 12.3 for 1907, 1908, and 1909, a fall of over 16 per cent.

For the purpose of examining this reduction minutely and separating from any true reduction that may have occurred the falling off due to changed exposure, we will compare in detail the New York City Weather Bureau records with those obtained at the New York Meteorological Observatory. The latter institution is maintained by the city of New York under the direction of Dr. Daniel Draper, who has kept a continuous record for over 40 years. The data obtained include hourly wind movement in miles per hour, and direction at each hour to 16 points of the compass. Doctor Draper's instruments are exposed at an elevation of 79 feet above the ground on the roof of the Arsenal in Central Park, about 4½ miles north-northeast of the Weather Bureau office. Immediate surroundings have not changed much since 1898, and the changes that have occurred (growth of trees, progress of building in the vicinity,

[2]For lack of space, curves for January and the year, only, are reproduced; but the others show the same general characteristics.

etc.), if of appreciable effect, tend to counteract, in a comparison, evidences of a reduction in velocity at the down-town station. The method of comparison used in this study does not necessitate a comparison of instruments or a discussion of the exposure at Central Park; it depends upon the constancy of conditions there, and, since there is no evidence of any material change in the exposure of the instruments at the Park during the whole period, we may reasonably conclude that if a given wind at Central Park was accompanied, on the average, by a certain wind at the Weather Bureau station during 1900, 1901, and 1902, similar winds will now usually correspond, unless the exposure at the latter station has been modified.

The first step in our comparison was tabulating together the hourly wind direction and movement at the two stations for each hour during several months in both periods just mentioned. With the exceptions noted below, the directions almost always agree during steady winds, and a relation between velocities is at once apparent. Next the movements at the Weather Bureau corresponding to each velocity recorded at Central Park were arranged in columns, for early and late years separately, and means taken of each column. Then similar tables were made and means computed for each of the 8 cardinal points of the compass; intercardinal points in the Central Park record were assigned to the cardinal point nearest that recorded at the other station at the time. The figures for directions not exactly agreeing after this modification were kept separate and were not used in computing means, except as noted below. In the early record a tendency exists for west winds at the city observatory to become northwest at the Weather Bureau office; in the later record this tendency disappears. In the early record about 30 per cent of Central Park's north winds become northeast and northwest at the Weather Bureau office; later the percentage is more than 80, and the hourly figures were used in obtaining means. (All means are given in Table 2).

Then, with movements at Central Park as abscissæ and movements at the Weather Bureau as ordinates, results were plotted on cross-section paper and smooth curves drawn for each case (see fig. 6). From these curves we can obtain directly the early and late Weather Bureau velocities corresponding on the average to any given Central Park velocity and direction; and, similarly, given the Weather Bureau velocity we can obtain the usual corresponding record at Central Park Also the decrease in the Weather Bureau record is given in detail for each case by the length of the portions of the ordinates intercepted between the early and late curves.

From fig. 6 it will be seen that:

1. There has been a considerable reduction in wind movement at the Weather Bureau station on account of new buildings erected.

2. North winds have been affected the most; northeast and east have not been changed materially; while other directions have been considerably reduced. Table 3 gives present movements and reductions per cent for original movements of 10 miles and multiples thereof.

3. Very low velocities have been reduced but slightly or not at all; when, for any direction, we find a reduction, it increases with the velocity.

4. For each direction there is a different relation between velocities; due, no doubt, to local conditions at the two stations. In each case the movement at the Weather Bureau Observatory may be expressed as a function of the movement at the other station by finding the equation of the corresponding curve. Thus, for the early record of southeast winds, we have, very closely,

$$y=\frac{(x+5)^3}{240}+\frac{x+5}{2}+3.5$$

where y is the movement at the former station and x the movement at the latter. For northeast winds we have a straight line with the equation,

$$y=1.4x+4.1$$

5. If we exclude velocities of 5 miles, or less, at Central Park, the relations may be closely shown by straight lines, and the forms of the corresponding functions are very simple, being shown on the face of fig. 6.

It is plain that the exposure for winds from the north has been much impaired by the massing of tall buildings in that direction; but this is not as serious a matter as might at first appear, these winds being comparatively light and infrequent. Southeast and south winds, although considerably reduced, still give good records; nor have the prevailing westerlies (northwest to southwest) suffered serious deflection, or velocity reduction, and northeast winds, which are frequent, have not been noticeably affected.

TABLE 2.—*Average hourly wind movement at Weather Bureau office, corresponding to given hourly wind movement at Central Park.*

Wind movement at Central Park (miles per hour).	Direction of wind at Central Park.																	
	North.		Northeast.		East.		Southeast.		South.		Southwest.		West.		Northwest.		All directions.	
	Early record.	Late[1] record.	Early record.	Late record.	Early record.	Late record.	Early record.	Late record.	Early record.	Late record.	Early record.	Late record.	Early record.	Late record.	Early record.	Late record.	Early record.	Late record.
0	4.5	.....	.....	5.0	5.2	5.5	.....	.....	.....	3.8	.....	.....	5.7	5.6	5.9	4.7	5.4	4.0
1	7.5	.....	5.6	4.0	7.1	6.7	5.9	(8.5)	7.5	6.6	6.9	7.6	7.6	6.3	6.6	6.8	6.3	5.8
2	7.6	.....	7.5	8.0	6.1	7.6	8.3	10.8	7.6	7.5	6.1	6.8	6.8	7.8	8.9	9.2	6.8	7.1
3	8.4	6.6	7.4	9.2	9.4	9.7	9.2	10.8	8.4	8.1	5.9	6.8	8.2	8.2	9.1	10.2	8.0	7.8
4	11.3	8.4	10.0	10.1	9.1	13.8	11.5	8.4	11.3	8.9	7.5	7.4	9.1	9.8	9.7	9.6	9.0	8.5
5	12.0	8.7	11.0	10.4	11.5	12.5	14.3	10.6	12.0	10.2	7.8	8.9	9.7	11.0	11.8	11.4	10.1	9.5
6	12.2	9.6	12.4	11.2	14.1	15.2	14.4	12.4	12.2	12.0	8.4	8.7	12.1	12.0	13.0	11.3	11.7	10.3
7	17.8	9.5	12.7	13.9	14.4	14.8	15.2	11.6	15.8	12.6	10.5	10.4	14.7	12.8	14.8	13.1	13.4	11.8
8	16.5	10.0	15.3	13.6	21.8	19.9	17.5	15.2	16.5	11.9	9.8	9.9	14.0	15.2	18.9	14.0	14.8	12.5
9	15.1	11.0	19.6	16.3	.....	18.1	20.0	15.9	15.1	12.4	10.1	9.8	15.1	15.5	18.6	14.9	16.8	14.4
10	20.0	11.1	19.3	18.9	27.4	25.5	27.3	.....	20.0	15.3	14.0	12.7	16.8	16.4	20.1	17.2	20.9	15.1
11	(20.5)	12.3	20.7	19.6	.....	26.2	27.7	.....	(20.5)	15.7	12.7	11.2	22.4	18.5	24.0	18.9	23.3	16.3
12	.....	12.2	21.6	21.1	.....	27.8	35.2	.....	.....	17.2	14.7	11.6	24.6	19.9	25.0	21.6	24.1	18.8
13	23.7	11.2	22.9	22.4	.....	.....	39.5	.....	23.7	16.2	15.5	14.9	26.3	21.7	26.9	22.9	25.6	20.1
14	.....	13.6	24.6	25.1	.....	.....	.....	.....	.....	.....	14.7	14.8	.....	22.0	29.1	25.3	28.9	19.4
15	.....	13.3	25.8	25.4	.....	.....	.....	.....	.....	.....	.....	17.0	32.0	22.2	32.9	26.0	30.8	21.8
16	(29.0)	16.0	25.3	26.1	.....	.....	.....	.....	(29.0)	.....	20.0	.....	.....	27.1	31.5	28.3	31.0	24.9
17	.....	17.1	(29.8)	.....	.....	.....	.....	.....	.....	27.7	.....	.....	34.3	29.7	37.1	31.0	34.3	26.3
18	.....	21.2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39.8	31.4	39.4	31.9	37.3	29.3
19	.....	16.8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	39.7	29.1	39.3	30.9	39.5	28.9
20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	41.4	34.5	41.4	30.2	40.5	31.2
21	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	49.8	39.2	40.2	34.6	43.4	36.6
22	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	47.0	38.3	46.2	.....	44.0	38.9
23	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	42.6	32.2	43.8	36.9
24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	46.0	40.4	.....	.....	49.4	36.6
25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	57.0	.....	54.2	.....	52.2	38.5
26	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	56.7	.....	.....	.....	54.6	.....
27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	54.0	.....

[1]Means include corresponding Northeast and Northwest winds (see text).

TABLE 3.—*Reduction in wind movement at the Weather Bureau office.*

Directions.	Former movement 10 miles per hour.		Former movement 20 miles per hour.		Former movement 30 miles per hour.		Former movement 40 miles per hour.		Former movement 50 miles per hour.	
	Present movement.	Reduction.	Present movement.	Reduction.	Present movement.	Reduction.	Present movement.	Reduction.	Present movement.	Reduction.
		Per cent.		*Per cent.*		*Per cent.*		*Per cent.*		*Per cent.*
North	7.3	27	11.0	45						
Northeast	10.0	0	20.0	0	30.0	0				
East	10.0	0	19.0	5						
Southeast	9.4	6	15.6	22						
South	8.6	14	15.3	23.5						
Southwest	9.8	2								
West	9.6	4	17.6	12	25.0	16.7	32.7	18.2	40.5	19
Northwest	9.0	10	17.0	15	25.2	16	32.6	18.5		
Average of all	8.9	11	15.8	21	23.2	22.7	31.2	22	39.3	23.4

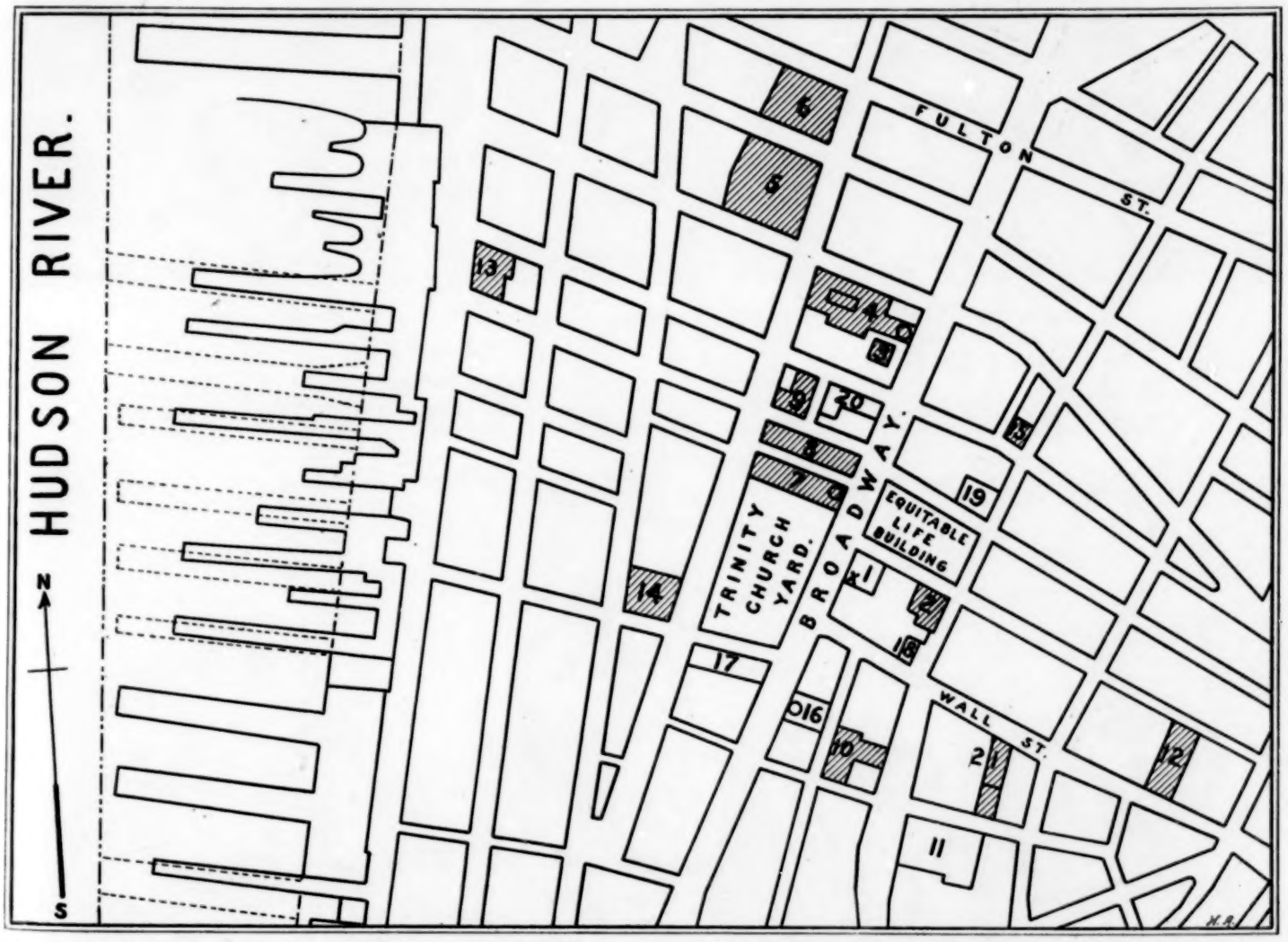


FIG. 1.—Section of southern portion of Manhattan Island, showing location of Weather Bureau office with respect to other buildings in vicinity.

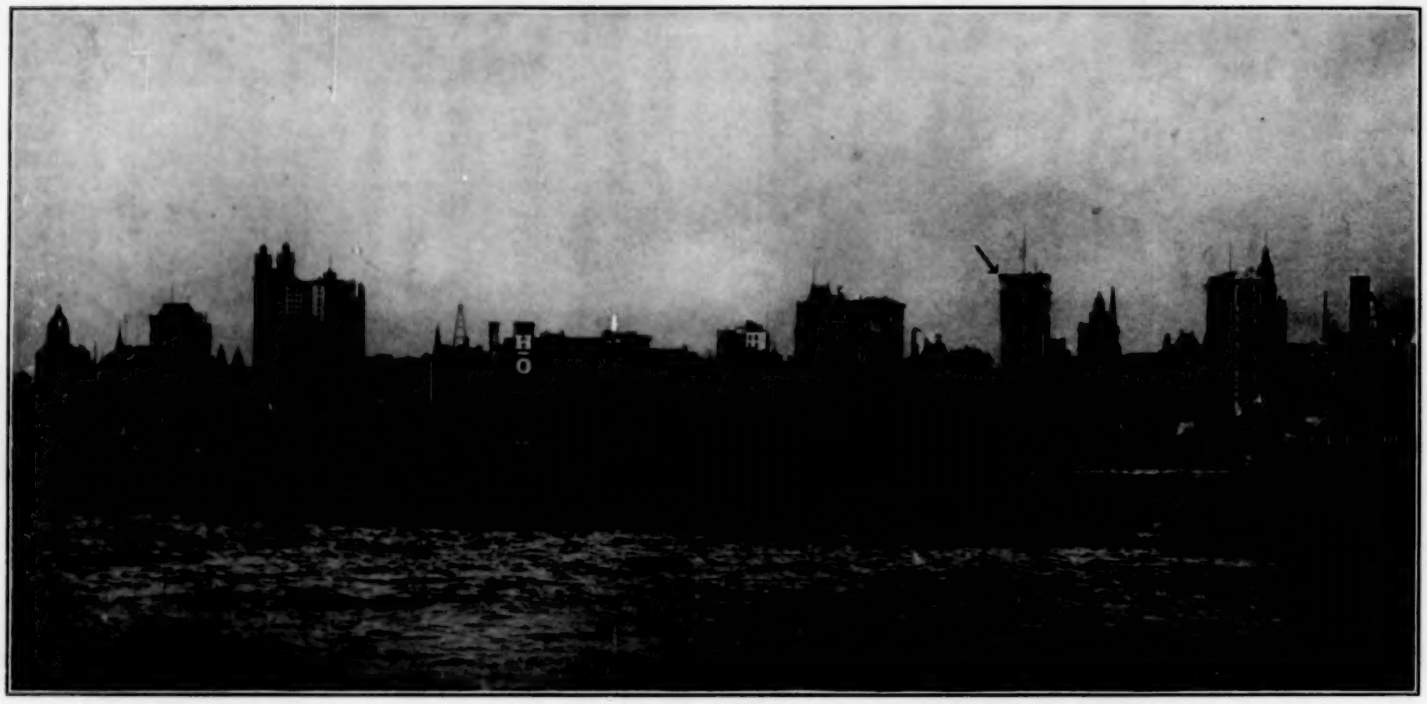


FIG. 2.—Water front, New York, in 1901. Arrow indicates location of U. S. Weather Bureau office.

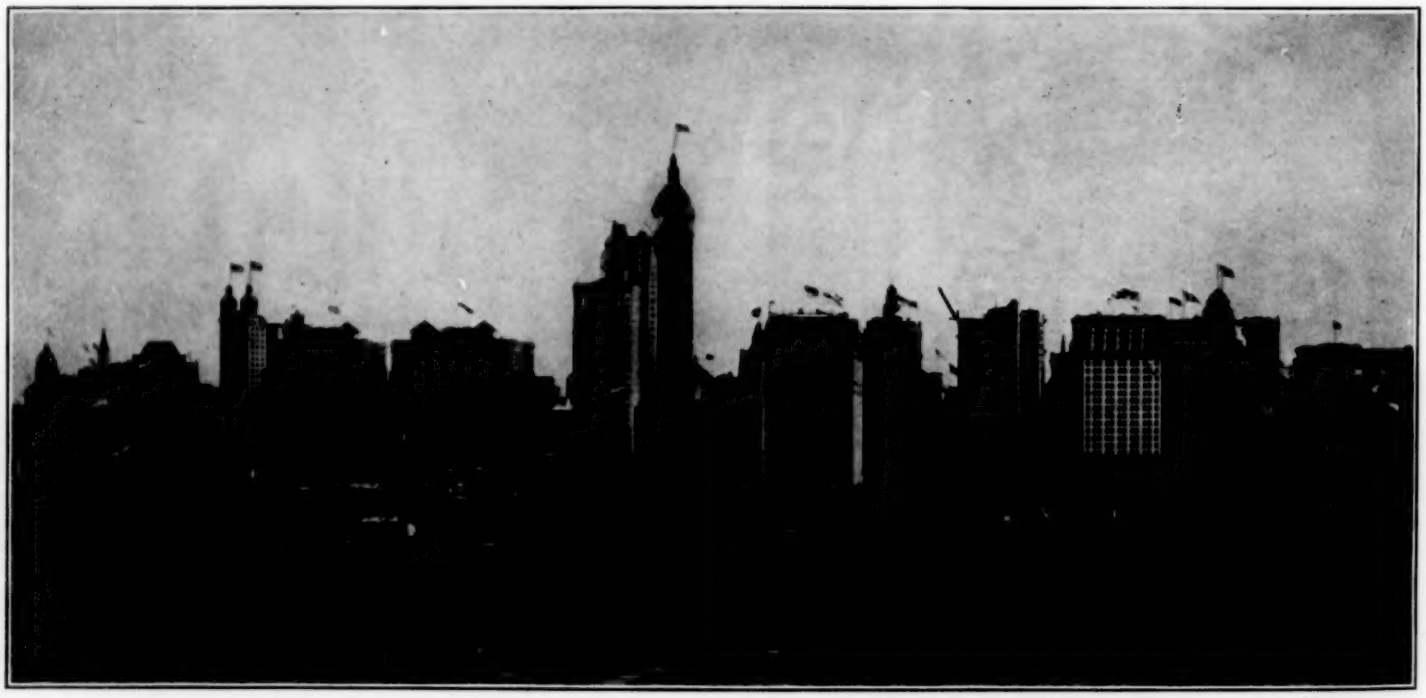


FIG. 3.—Water front, New York, in 1908. Arrow indicates location of U. S. Weather Bureau office.

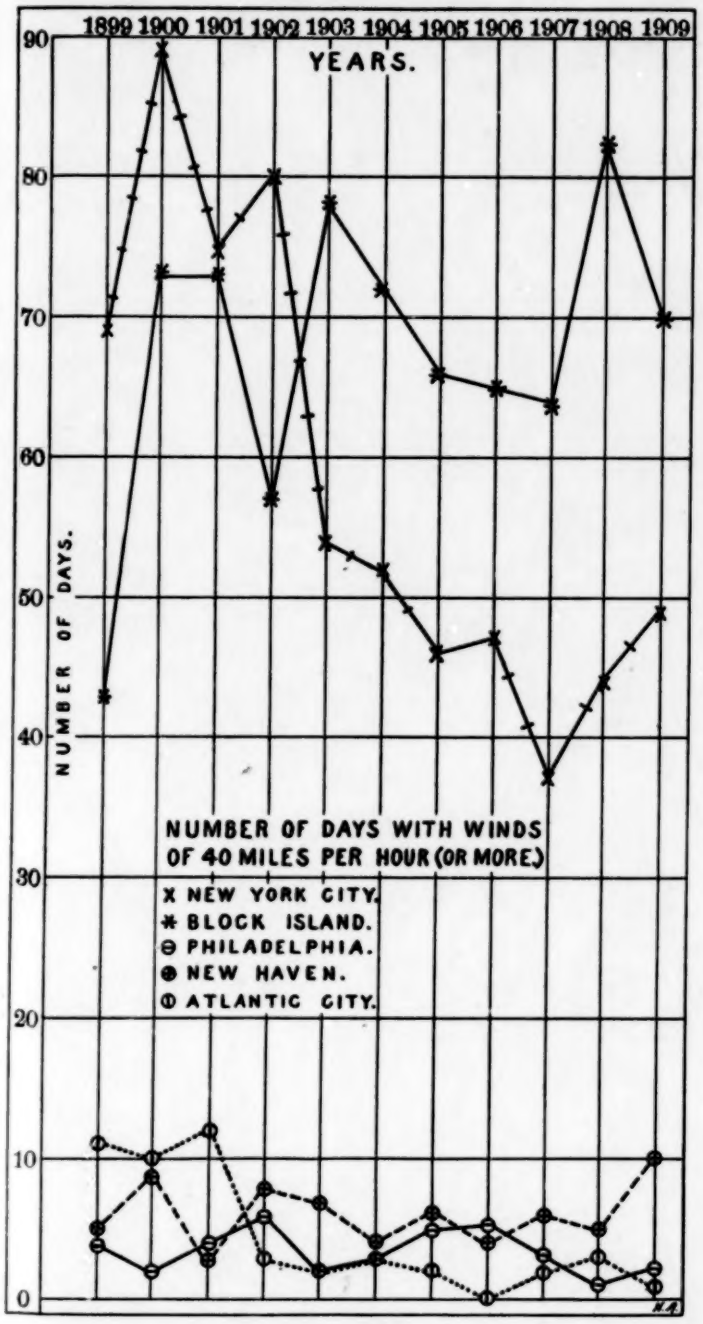

1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909
YEARS.
NUMBER OF DAYS.
90
80
70
60
50
40
30
20
10
0
NUMBER OF DAYS WITH WINDS OF 40 MILES PER HOUR (OR MORE.)
X NEW YORK CITY.
* BLOCK ISLAND.
⊖ PHILADELPHIA.
⊕ NEW HAVEN.
① ATLANTIC CITY.

FIG. 4.

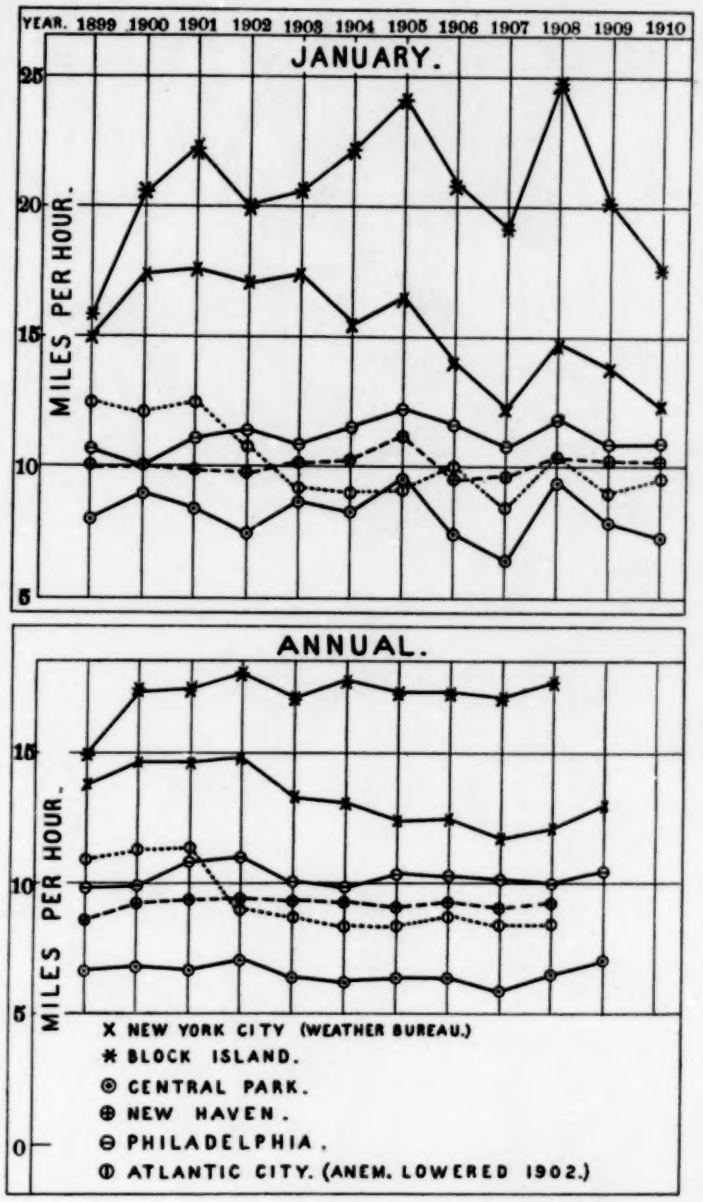

YEAR. 1899 1900 1901 1902 1903 1904 1905 1906 1907 1908 1909 1910
JANUARY.
MILES PER HOUR.
25
20
15
10
5
ANNUAL.
MILES PER HOUR.
15
10
5
0
X NEW YORK CITY (WEATHER BUREAU.)
* BLOCK ISLAND.
⊙ CENTRAL PARK.
⊕ NEW HAVEN.
⊖ PHILADELPHIA.
① ATLANTIC CITY. (ANEM. LOWERED 1902.)

FIG. 5.

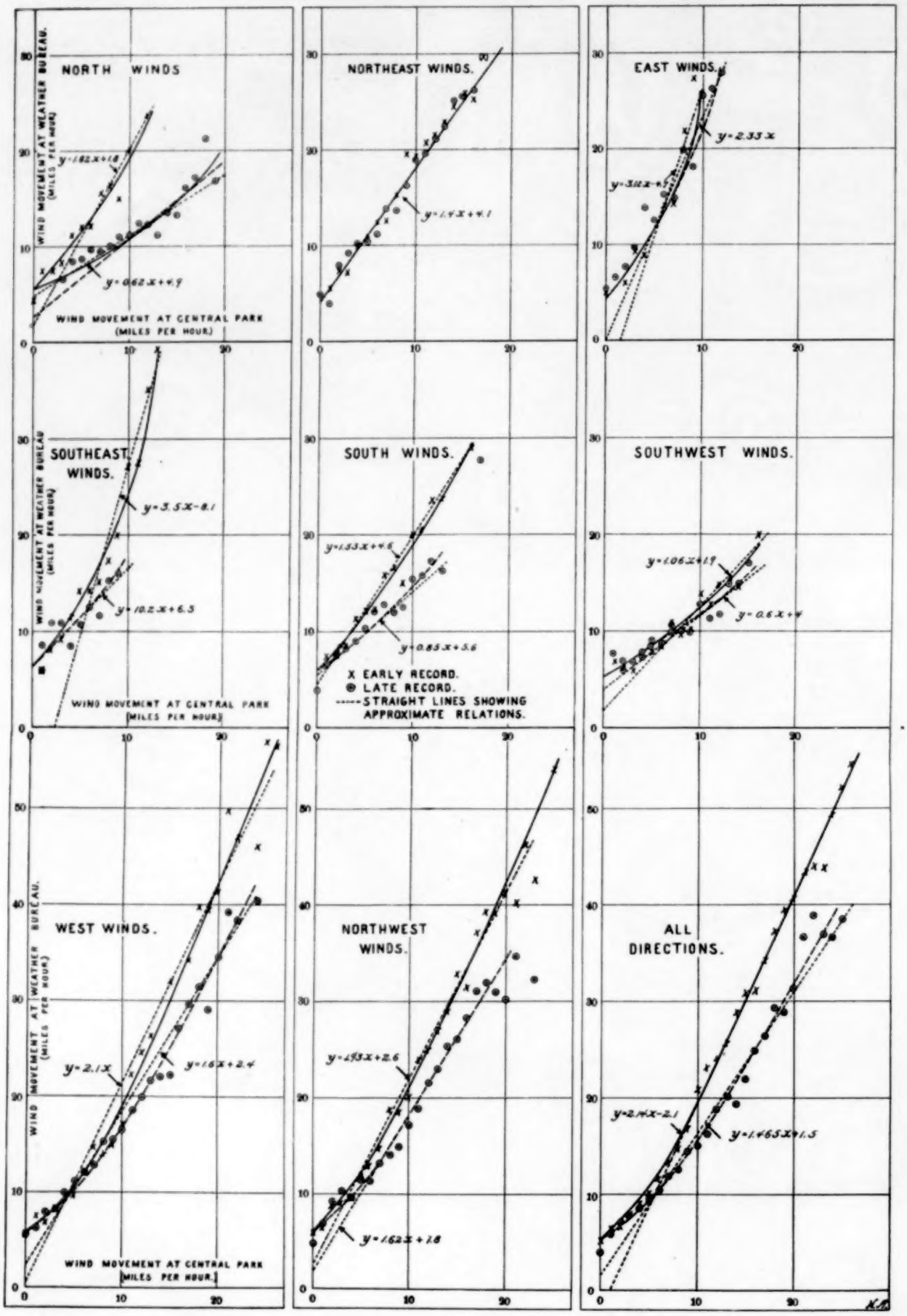

NORTH WINDS
y=1.82x+1.8
y=0.62x+4.9
NORTHEAST WINDS.
y=1.7x+4.1
EAST WINDS.
y=2.33x
y=3.12x+4.5
SOUTHEAST WINDS.
y=3.5x-8.1
y=1.8.2x+6.3
SOUTH WINDS.
y=1.33x+4.6
y=0.85x+3.6
X EARLY RECORD.
⊕ LATE RECORD.
-----STRAIGHT LINES SHOWING APPROXIMATE RELATIONS.
SOUTHWEST WINDS.
y=1.06x+1.9
y=0.6x+4
WEST WINDS.
y=2.1x
y=1.6x+2.4
NORTHWEST WINDS.
y=1.93x+2.6
y=1.62x+1.8
ALL DIRECTIONS.
y=2.14x-2.1
y=1.465x+1.5
WIND MOVEMENT AT WEATHER BUREAU. (MILES PER HOUR)
WIND MOVEMENT AT CENTRAL PARK (MILES PER HOUR)

Fig. 6.

TABLE 1.—*Climatological data for October, 1910. District No. 1, North Atlantic States.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Maine.																				
Bar Harbor	Hancock	20	24	49.4	+ 1.4	75	5	26	31	27	1.01	− 3.36	0.45	T.	7	11	8	12	sw.	Wm. Miller.
Cornish	York	778	55	49.1	+ 1.6	85	6	18	31	43	2.04	− 2.30	0.42	0.5	12	13	6	12	nw.	T. H. West.
Eastport	Washington	53	38	47.8	+ 1.2	68	5	31	31	22	1.85	− 2.00	0.63	0.0	15	6	6	19	w.	U. S. Weather Bureau.
Ellsworth	Hancock	.....	0	47.2	.....	73	7	22	31	33	2.49	.....	0.65	0.0	12	10	6	15	w.	S. P. Sutton.
Fairfield	Somerset	90	25	48.2	+ 1.1	79	5†	21	31	34	1.10	− 1.56	0.31	0.0	6	13	5	13	.....	Edward F. Parker.
Farmington	Franklin	450	13	47.3	− 0.3	84	5†	16	31	49	1.19	− 2.15	0.25	1.0	9	12	8	11	nw.	State Normal School.
Gardiner	Kennebec	163	18	49.3	+ 0.1	79	5†	21	31	36	2.26	− 1.25	0.60	0.0	12	12	4	15	nw.	Samuel D. Soule.
Greenville	Piscataquis	1,000	6	43.6	.....	80	6	17	31	40	2.13	.....	0.64	0.0	13	.....	.....	.....	.....	U. S. Weather Bureau.
Houlton	Aroostook	362	8	49.0	.....	76	6	20	31	39	1.65	.....	0.50	.....	6	13	8	10	n.	Bangor & Aroostook R. R.
Lewiston	Androscoggin	185	36	50.0	+ 2.8	85	6	24	31	41	1.69	− 2.10	0.33	0.5	12	12	9	10	nw.	Union Water Power Co.
Madison	Somerset	257	7	45.6	.....	77	20	18	31	44	1.51	.....	0.35	T.	11	16	0	15	w.	Wm. Jardine.
Millinocket	Penobscot	386	7	45.8	.....	81	6	19	31	36	2.21	.....	0.96	1.0	13	7	2	22	sw.	H. S. Ferguson.
North Bridgton	Cumberland	450	17	49.8	+ 0.7	83	6†	21	31	45	3.13	0.00	0.93	2.0	9	9	14	8	nw.	G. E. Chadbourne.
Orono	Penobscot	129	41	48.0	+ 1.8	78	5†	21	31	37	2.56	− 1.34	1.32	T.	12	8	8	15	nw.	Agricultural Exp. Station.
Patten	....do	550	8	44.0[b]	.....	78[b]	5†	16[b]	31	36[b]	2.98	.....	1.33	0.7	11	11[b]	7[b]	11[b]	w.	Bangor & Aroostook R. R.
Portland	Cumberland	99	39	50.0	+ 0.9	77	5†	29	31	29	1.27	− 2.39	0.33	0.0	9	11	8	12	nw.	U. S. Weather Bureau.
Presque Isle	Aroostook	.....	0	44.2	.....	77	6	18	31	34	2.87	.....	1.00	1.0	15	10	6	15	w.	San Lorenzo Merriman.
Rumford Falls	Oxford	505	17	46.6	− 0.1	81	6	21	31	40	1.36	− 1.48	0.31	0.2	8	16	10	5	nw.	Chas. A. Mixer.
Winslow	Kennebec	90	15	47.8	.....	82	5†	15	31	41	1.46	.....	0.29	0.0	10	12	15	3	w.	Hollingsw'th & Whitney Co.
New Hampshire.																				
Alstead Center	Cheshire	1,120	6	48.6	+ 0.3	79	5	23	30†	33	1.72	− 1.23	0.35	0.0	9	18	4	9	nw.	Frank Dewing.
Benton	Grafton	.....	0	45.2	.....	82	6	19	31	30	2.00	.....	0.51	0.5	8	12	6	13	nw.	N. H. State Sanatorium.
Bethlehem	....do	1 470	18	45.5	− 0.7	80	6	20	31	35	1.31	− 1.79	0.31	1.0	11	12	2	17	nw.	Benjamin Tucker.
Concord	Merrimack	350	50	49.7	+ 1.0	85	5	19	31	45	1.03	− 2.21	0.44	T.	9	15	6	10	nw.	U. S. Weather Bureau.
Durham	Stafford	88	15	51.0	+ 1.9	86	5	17	31	45	1.64	− 2.12	0.64	0.0	6	18	4	9	nw.	Agricultural Exp. Station.
Franklin	Merrimack	440	11	49.6	.....	85	5	18	31	49	1.06	.....	0.26	T.	13	14	8	9	nw.	Dr. C. P. Webster.
Grafton	Grafton	863	24	47.1	+ 0.4	84	5	12	31	49	0.75	− 2.29	0.16	1.0	9	15	6	10	nw.	Perley R. Kimball.
Hanover	....do	603	76	48.3	+ 1.9	85	6	18	31	44	1.12	− 1.46	0.32	0.3	10	10	7	14	nw.	Dartmouth College.
Keene	Cheshire	506	25	50.2	+ 2.6	85	5	16	31	46	1.41	− 1.94	0.40	T.	8	14	10	7	nw.	Samuel Wadsworth.
Nashua	Hillsboro	125	25	52.4	+ 3.5	84	5†	20	31	37	1.34	− 1.31	0.38	0.0	8	14	9	8	nw.	Jackson Company.
Newton	Rockingham	.....	22	50.4	+ 2.0	84	5	15	31	37	2.04	− 2.22	0.52	0.0	6	15	11	5	nw.	W. C. Gale.
Plymouth	Grafton	500	22	47.0	+ 2.3	81	6	15	31	43	1.48	− 1.91	0.38	2.0	9	20	2	9	w.	Mrs. Hattie G. Trow.
Vermont.																				
Bloomfield	Essex	.....	3	45.4	.....	81	6	11	31	42	2.07	.....	0.70	0.8	12	9	8	14	s.	Lyman Falls L. and P. Co.
Cavendish	Windsor	910	7	48.6[b]	.....	84[b]	5†	15[b]	31	44[b]	0.99	.....	0.42	0.5	7	14[c]	6[c]	6[c]	w.	Miss M. A. Kingsbury.
Chelsea	Orange	830	15	45.7	+ 0.5	83	6	16	31	42	1.89	− 0.34	0.40	1.0	9	10	9	12	n.	W. F. Dewey.
Jacksonville	Windham	1,000	25	48.2	+ 3.6	78	5	10	31	35	0.89	− 3.61	0.15	0.0	10	14	13	4	sw.	Miss Martha French.
Manchester	Bennington	980	11	49.2[a]	.....	77	6	26[a]	30	32[a]	1.89	.....	0.59	T.	5	9[a]	12[a]	9[a]	sw.	N. M. Canfield.
St. Johnsbury	Caledonia	711	17	48.0	+ 1.6	81	6	18	31	42	1.44	− 0.58	0.41	2.0	12	11	7	13	sw.	Fairbanks Museum.
Woodstock	Windsor	700	18	47.5	+ 1.7	84	6	17	31	43	1.46	− 1.08	0.48	T.	7	11	2	18	.....	John S. Eaton.
Massachusetts.																				
Amherst	Hampshire	222	21	52.2	+ 3.2	84	5	19	31	38	0.93	− 2.82	0.34	T.	7	18	8	5	sw.	Agricultural Exp. Station.
Blue Hill	Norfolk	640	26	53.0	+ 3.5	81	5†	28	30	32	1.64	− 3.07	0.54	0.0	12	15	4	12	nw.	Blue Hill Observatory.
Boston	Suffolk	124	40	56.0	+ 3.7	85	5	33	30	32	1.14	− 2.72	0.55	0.0	10	14	5	12	sw.	U. S. Weather Bureau.
Chestnut Hill	....do	124	30	55.5	+ 4.8	87	5	22	31	37	1.69	− 2.51	0.69	0.0	7	23	3	5	.....	Metropolitan Water Board.
Clinton	Worcester	370	14	52.2	.....	80	6	24	30	31	1.88	.....	0.58	0.0	8	19	2	10	.....	Do.
Concord	Middlesex	139	20	51.4	+ 2.1	85	5	18	31	39	1.65	− 2.33	0.51	0.0	10	11	12	8	nw.	Fred. A. Tower.
Fall River	Bristol	200	44	54.6	+ 1.4	78	5†	30	30	25	1.74	− 2.99	0.62	0.0	9	8	17	6	nw.	C. V. S. Remington.
Fitchburg	Worcester	550	27	52.8	+ 3.7	84	5	21	31	38	1.34	− 2.64	0.37	0.0	8	19	3	9	w.	Dr. A. P. Mason.
Framingham	Middlesex	160	30	54.4	+ 4.2	84	5†	20	31	39	1.88	− 2.47	0.53	0.0	9	.....	.....	.....	.....	Metropolitan Water Board.
Hyannis	Barnstable	31	19	53.8	− 0.5	73	6	30	30	28	2.92	− 0.79	0.95	0.0	12	17	8	6	sw.	C. F. Sleeper.
Lawrence	Essex	51	26	52.4	+ 2.4	84	6	22	31	31	1.56	− 2.29	0.49	0.0	9	12	16	3	sw.	Essex Company.
Lowell	Middlesex	100	25	54.2	+ 4.3	83	5†	23	31	34	1.18	− 2.49	0.47	0.0	7	.....	.....	.....	.....	Prop's Locks and Canals.
Middleboro	Plymouth	53	24	52.6	+ 2.8	79	6	17	31	43	1.77	− 2.77	0.64	0.0	7	8	14	9	nw.	A. R. Gurney.
Monson	Hampden	420	26	51.0	+ 1.7	80	5†	19	31	38	1.05	− 2.98	0.25	0.0	8	21	5	5	nw.	Dr. G. E. Fuller.
Nantucket	Nantucket	15	24	55.8	+ 1.3	73	6	36	31	21	4.72	+ 1.33	3.86	0.0	10	11	11	9	sw.	U. S. Weather Bureau.
New Bedford	Bristol	88	98	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	City Engineer.
Norfolk	Norfolk	244	7	54.4	.....	89	5	16	31	47	1.84	.....	0.48	0.0	7	16	9	6	w.	Miss Ruby H. Martyn.
Northampton	Hampshire	205	2	53.0	.....	86	7	19	31	45	0.92	.....	0.35	0.0	4	21	3	7	nw.	D. E. Hoxie.
Plymouth	Plymouth	.....	25	52.5	.....	80	7	29	13†	31	1.78	.....	1.66	0.0	6	22	0	9	sw.	Miss Laura B. Knapp.
Provincetown	Barnstable	40	23	55.0	+ 2.4	72	6†	38	30	25	2.20	− 1.96	0.90	0.0	5	19	0	12	sw.	Gideon Bowley.
Rockport	Essex	25	8	54.2	.....	79	5	29	21	24	2.11	.....	0.91	0.0	7	13	10	8	nw.	C. F. B. Bearse.
Rutland	Worcester	1,160	8	50.4	.....	79	5	24	29	28	1.23	.....	0.35	0.0	7	15	6	10	sw.	State Sanatorium.
South Egremont	Berkshire	764	8	47.2	.....	77	6	16	21	38	1.18	.....	0.45	T.	5	.....	.....	.....	nw.	Roscoe C. Taft.
Turners Falls	Franklin	200	19	51.3	+ 1.4	82	5†	21	31	32	1.01	− 1.53	0.43	0.3	4	.....	.....	.....	.....	Turners Falls Co.
Westboro	Worcester	298	36	55.4	+ 4.2	85	5	20	31	40	1.51	− 2.66	0.45	0.0	8	.....	.....	.....	.....	G. S. Newcomb.
Williamstown	Berkshire	711	19	51.0	+ 2.9	79	5†	26	30	33	2.03	− 1.11	0.80	0.0	8	13	9	9	s.	Williams College.
Worcester	Worcester	518	18	53.0	+ 2.4	82	5	28	31	26	1.42	− 2.14	0.68	0.0	8	13	9	9	sw.	G. W. Swan.
Rhode Island.																				
Block Island	Newport	26	30	56.3	+ 1.0	72	6	38	30	18	2.37	− 1.74	1.17	0.0	7	19	3	9	sw.	U. S. Weather Bureau.
Bristol	Bristol	53	24	55.0	+ 2.7	72	6	32	31	22	1.71	− 2.45	0.59	0.0	8	18	7	6	sw.	N. G. Herreshoff.
Kingston	Washington	250	21	52.6	+ 1.8	79	6	25	31	37	2.09	− 3.42	0.79	0.0	8	15	9	7	w.	Nathaniel Helme.
Narragansett Pier	Newport	22	28	55.7	+ 3.5	78	6†	24	31	35	2.08	− 2.46	0.76	0.0	12	22	5	4	w.	U. S. Weather Bureau.
Providence	Providence	182	6	54.3	+ 2.1	81	5	27	31	30	1.60	− 2.26	0.51	0.0	9	14	10	7	nw.	Do.
Connecticut.																				
Bridgeport	Fairfield	20	17	56.5	.....	83	5†	25	31	36	1.25	.....	0.58	0.0	4	17	8	6	sw.	William Jennings.
Canton	Hartford	900	49	50.6	+ 1.2	79	5	19	31	34	1.02	− 3.74	0.28	0.0	5	15	7	9	nw.	G. J. Case.
Colchester	New London	370	24	52.3	+ 1.4	79	5	18	31	38	1.66	− 2.64	0.68	0.0	7	16	10	5	w	S. P. Willard.
Cream Hill	Litchfield	1,300	14	51.6	+ 0.7	79	6	21	30	37	1.38	− 2.08	0.81	0.0	11	15	6	10	nw.	C. L. Gold.
Danielson	Windham	300	8	52.3	.....	82	5	18	31	41	1.88	.....	0.50	0.0	6	21	6	4	s.	F. E. Bitgood.
Hartford	Hartford	159	6	54.8	+ 3.6	80	6	26	31	32	0.77	− 3.09	0.19	0.0	7	8	10	13	nw.	U. S. Weather Bureau.
Hawleyville	Fairfield	600	12	54.4	+ 1.6	82	5	20	31	36	0.78	− 3.68	0.20	0.0	5	19	4	8	nw.	Edson N. Hawley.
New Haven	New Haven	107	123	55.8	+ 3.0	80	5	28	31	30	1.15	− 2.77	0.51	0.0	7	14	12	5	nw.	U. S. Weather Bureau.
New London	New London	47	40	56.3	+ 3.1	80	5†	28	31	29	2.58	− 1.67	1.20	0.0	6	15	8	8	sw.	Thos. C. Dillon.
North Grosvenordale	Windham	400	20	52.4	+ 1.8	82	5	18	30	39	1.49	− 2.27	0.55	0.0	8	17	9	5	sw.	Grosvenor Dale Co.
Norwalk	Fairfield	116	20	54.2	+ 2.7	84	5†	21	31	42	1.33	− 2.31	0.50	0.0	6	17	9	5	sw.	Geo. C. Comstock.
Southington	Hartford	140	41	54.0	+ 3.6	82	5	17	31	40	0.55	− 2.99	0.15	0.0	5	10	18	3	sw.	Luman Andrews.
Storrs	Tolland	640	22	54.0	+ 4.5	79	6	21	31	36	1.42	− 2.65	0.59	0.0	6	15	1	15	w.	Agricultural Exp. Station.
Voluntown	New London	260	25	51.9	+ 1.1	78	6	15	31	43	1.66	− 2.71	0.62	0.0	7	23	2	6	nw.	F. S. Bitgood.
Waterbury	New Haven	400	35	55.0	+ 2.8	85	5	20	31	40	0.98	− 2.73	0.26	0.0	6	.....	.....	.....	.....	N. J. Welton.
New York.																				
Addison	Steuben	1,000	20	54.0	+ 3.8	88	6	22	30	50	1.33	− 1.66	0.49	T.	5	16	10	5	sw.	H. R. Ainsworth.
Albany	Albany	97	89	53.2	+ 2.8	83	6	30	31	34	0.87	− 2.12	0.48	T.	6	11	14	6	s.	U. S. Weather Bureau.
Alfred	Allegany	.....	15	50.1	+ 3.8	79	18†	18	30	48	2.64	− 0.57	0.67	1.0	.....	.....	.....	.....	.....	F. S. Place.
Amsterdam	Montgomery	277	6	50.6	.....	84	6	24	30	37	1.39	.....	0.45	.....	6	23	4	4	w.	Emery Elwood.
Athens	Greene	90	8	55.0	.....	84	6	26	30†	39	0.89	.....	0.40	T.	4	14	11	6	sw.	E. C. Brooks.
Ballston Lake	Saratoga	400	6	50.8	.....	82		19	31	40	1.36	.....	0.46	T.	9	15	7	9	w.	Geo. R. Schauber.

TABLE 1.—*Climatological data for October, 1910. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York—Cont'd.																				
Bedford	Westchester	450	19	58.0	+ 6.0	88	5	24	31	38	2.34	− 1.60	0.91	0.0	5	18	8	5	.....	Dr. L. Rosenberg.
Binghamton	Broome	875	19	50.3	+ 1.1	82	6	23	30	38	1.46	− 1.66	0.78	T.	7	13	5	13	nw.	U. S. Weather Bureau.
Bouckville	Madison	1,350	13	49.8	+ 0.8	80	6	23	31	35	1.64	− 2.27	0.50	1.5	9	12	6	13	nw.	L. W. Griswold.
Boyds Corners	Putnam	560	28	.....	.....	.....	.....	.....	.....	.....	0.99	− 3.35	.....	.....	.....	.....	.....	.....	.....	Thomas Manning.
Carmel	....do	500	18	54.6	+ 3.5	83	6	23	31	39	1.07	− 3.00	0.43	0.0	6	14	4	13	nw.	Do.
Chatham	Columbia	470	9	53.2	.....	83	6	23	30	36	1.02	.....	0.37	T.	6	20	7	4	n.	Morton R. Tank.
Cooperstown	Otsego	1,250	56	47.7	+ 1.0	80	6	24	29	36	1.32	− 2.02	0.40	.....	10	15	7	9	s.	Elizabeth C. Keese.
Corinth	Saratoga	542	8	.....	.....	.....	.....	.....	.....	.....	1.27	.....	0.52	T.	4	.....	.....	.....	.....	A. M. Hollister.
Cortland	Cortland	1,129	48	53.7	+ 6.8	82	6†	26	13†	39	1.79	− 2.10	0.60	T.	9	16	7	8	nw.	F. G. Baker.
Cutchogue	Suffolk	32	33	56.2	+ 1.0	80	5†	30	30	24	2.47	− 0.95	1.51	0.0	6	12	16	3	sw.	Wm. A. Fleet.
De Ruyter	Madison	1,300	7	52.6	.....	83	6	22	13	43	2.47	.....	0.56	T.	10	13	5	12	s.	B. D. Crandall.
Easton	Washington	.....	20	.....	.....	.....	.....	.....	.....	.....	1.37	− 2.27	0.54	T.	5	.....	.....	.....	.....	H. Taber.
Elmira	Chemung	863	31	55.9	+ 4.9	82	6†	24	30	45	1.03	− 2.03	0.74	0.0	3	10	14	7	nw.	Gerity Bros.
Fort Hunter	Montgomery	280	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Wing.
Fort Plain	....do	316	6	52.6	.....	85	6	26	31	36	1.51	.....	0.40	T.	6	17	5	9	w.	Abram Devendorf.
Glens Falls	Warren	340	19	52.5	+ 3.4	85	6	22	31	37	1.56	− 1.51	0.40	T.	9	14	7	10	n.	Prof. C. L. Williams.
Gloversville	Fulton	850	18	49.0	+ 1.3	82	6	19	31	42	1.57	− 1.58	0.60	T.	7	17	9	5	w.	W. L. McLean.
Greenfield Center	Saratoga	314	12	50.8	+ 0.8	80	6	23	31	38	1.17	− 2.21	0.50	T.	7	18	6	7	nw.	S. E. Darrow.
Greenwich	Washington	425	13	51.6	+ 1.4	85	5†	22	20	40	1.34	− 1.64	0.32	T.	11	14	15	2	w.	Homer J. Whitcomb.
Griffin Corners	Delaware	2,260	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Kelsey H. Kelly.
Haskinville	Steuben	.....	15	.....	.....	.....	.....	.....	.....	.....	2.01	− 0.82	0.63	.....	6	.....	.....	.....	.....	W. G. Collins.
Homer	Cortland	.....	2	50.4	+ 4.4	81	6	23	30	40	1.93	.....	0.52	T.	10	15	8	8	nw.	Charles C. Mortimer.
Hoosick Falls	Rensselaer	410	8	.....	.....	.....	.....	.....	.....	.....	2.53	.....	0.71	T.	13	.....	.....	.....	w.	Sanford L. Cluett.
Indian Lake	Hamilton	1,705	11	46.0	+ 0.8	79	6	16	30	47*	2.00	− 1.66	0.40	.....	9	15	5	11	n.	Lester Severie.
Jeffersonville	Sullivan	1,240	7	51.3	.....	83	6	19	31	49	0.95	.....	0.60	T.	4	19	9	3	w.	Chas. Wilfert, Jr.
Lake Pleasant	Hamilton	.....	3	44.8	.....	79	7	19	30†	45	2.20	.....	0.70	.....	8	.....	.....	.....	.....	Willet Lawrence.
Liberty	Sullivan	2,300	28	49.6	+ 2.6	78	6	20	29	42	1.75	− 1.87	1.00	0.0	5	20	2	9	se.	Dr. H. M. King.
Little Falls	Herkimer	924	12	50.5	+ 1.1	86	6	22	13	35	1.86	− 1.60	0.43	0.0	8	20	4	7	w.	O. J. Dempster.
Mohonk Lake	Ulster	1,245	14	55.8	+ 6.5	80	5	25	30	31	1.60	− 2.17	0.58	0.0	5	17	10	4	nw.	Albert K. Smiley.
Morehouseville	Hamilton	1,697	2	46.1	.....	80	6	16	30	49	3.65	.....	0.80	2.0	9	5	17	9	w.	Theodore C. Remonda.
Mount Hope	Westchester	200	13	55.0	+ 2.1	85	9	28	13†	45	1.25	− 3.46	0.60	0.0	3	7	17	7	.....	Wm. A. Cornelius.
Newark Valley	Tioga	825	23	.....	.....	.....	.....	.....	.....	.....	0.99	− 2.70	0.52	T.	5	17	6	8	.....	M. D. Clinton.
New Berlin	Chenango	.....	3	.....	.....	.....	.....	.....	.....	.....	1.06	.....	0.23	.....	11	.....	.....	.....	.....	Roger Greene.
New Lisbon	Otsego	1,234	20	48.6	+ 2.6	77	6	17	13	48	0.89	− 2.45	0.33	T.	6	11	8	12	sw.	G. A. Yates.
New York City	New York	314	85	58.1	+ 2.5	83	6	32	30	26	3.79	+ 0.08	3.04	0.0	5	14	9	8	nw.	U. S. Weather Bureau.
North Creek	Warren	1,002	2	48.6	.....	82	6	20	3‡	47	1.67	.....	0.53	.....	5	15	7	9	w.	W. G. Kenwell.
Northville	Fulton	742	8	.....	.....	.....	.....	.....	.....	.....	1.45	.....	0.52	.....	7	.....	.....	.....	.....	P. C. Pickard.
Norwich	Chenango	1,015	4	52.9*	.....	78*	6	26*	31	32*	1.04	.....	0.30	.....	7	.....	.....	.....	.....	P. L. Clark.
Onconta	Otsego	1,112	16	52.8	+ 3.0	84	6	24	13	45	0.99	− 2.70	0.55	T.	4	18	6	7	nw.	H. W. Lee.
Oxford	Chenango	916	45	52.2	+ 5.2	81	6	24	30	38	1.62	− 2.45	0.35	.....	5	14	12	5	n.	John P. Davis.
Port Jervis	Orange	470	26	55.3	+ 4.5	82	6	19	31	43	0.90	− 2.79	0.48	0.0	4	7	19	5	sw.	Prof. John M. Dolph.
Salisbury	Herkimer	1,526	13	48.9	− 0.1	84	6	19	13	39	2.56	− 1.71	0.65	.....	8	19	5	7	w.	Joseph Ryan.
Salisbury Mills	Orange	314	11	52.6	.....	86	6	18	31	42	0.94	− 3.99	0.45	0.0	4	23	5	3	w.	H. P. Ramsdell.
Scarsdale	Westchester	200	6	56.0	.....	82	6	26	30	32	1.62	.....	1.27	0.0	3	24	6	1	nw.	C. H. Wilmarth.
Setauket	Suffolk	40	25	57.5	+ 3.2	81	5	34	30†	31	1.59	− 2.95	1.00	0.0	4	19	6	6	w.	Selah B. Strong.
Sherburne	Chenango	.....	3	.....	.....	.....	.....	.....	.....	.....	0.84	.....	0.21	.....	6	.....	.....	.....	.....	E. B. Collins.
Southampton	Suffolk	36	9	56.4	.....	77	5	31	21	29	3.06	.....	2.19	0.0	9	19	9	3	nw.	W. L. Jagger.
Southeast Reservoir	Putnam	310	15	.....	.....	.....	.....	.....	.....	.....	0.97	− 3.20	.....	.....	.....	.....	.....	.....	.....	Thomas Manning.
Spier Falls	Saratoga	400	9	50.2	.....	82	6	20	13	44	1.48	.....	0.61	T.	4	13	5	7	sw.	W. F. Anderson.
Trenton Falls	Oneida	751	7	.....	.....	.....	.....	.....	.....	.....	2.88	.....	0.67	T.	10	.....	.....	.....	.....	C. W. Young.
Tribeshill	Montgomery	268	7	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.70	.....	4	.....	.....	.....	.....	R. S. Marshall.
Utica	Oneida	537	44	.....	.....	.....	.....	.....	.....	.....	2.43	− 1.64	0.85	.....	6	.....	.....	.....	.....	W. E. Young.
Wading River	Suffolk	112	4	56.2	.....	81	5	27	29	45	2.04	.....	1.35	0.0	6	25	2	4	sw.	H. B. Fullerton.
Wappingers Falls	Dutchess	110	20	53.6	+ 1.6	82	6	24	30	32	1.03	− 2.96	0.52	0.0	6	13	16	2	n.	H. C. Townsend.
Warwick	Orange	538	16	.....	.....	.....	.....	.....	.....	.....	1.41	− 2.45	0.46	0.0	4	.....	.....	.....	.....	John W. Sly.
Waverly	Tioga	824	28	52.8	+ 3.2	86	6	17	30	45	0.88	− 2.20	0.43	0.3	6	12	9	10	nw.	Hon. J. F. Shoemaker.
West Berne	Albany	946	11	50.3	+ 0.7	85	6	18	30	54	0.38	− 2.56	0.73	.....	5	8	13	10	nw.	W. J. Haverly.
West Point	Orange	167	61	54.8	+ 1.4	81	7	30	31	31	1.35	− 2.47	0.60	0.0	5	9	18	4	e.	Maj. Chas. M. Gandy.
Windham	Greene	1,520	10	53.2	+ 2.0	80	6	19	30	44	0.86	− 2.68	0.35	.....	6	16	11	4	nw.	A. R. Mott.
Pennsylvania.																				
Altoona	Blair	1,181	22	58.5	+ 7.1	84	6†	31	30	35	1.05	− 1.37	0.89	T.	4	.....	.....	.....	.....	C. W. Billin.
Bethlehem	Northampton	260	1	57.4	.....	85	5	26	31	39	2.04	.....	0.83	0.0	6	26	3	11	w.	Prof. E. C. Roest.
Clearfield	Clearfield	1,107	2	53.2	.....	84	6	21	30	47	1.17	.....	0.78	T.	7	16	7	8	nw.	Raymond C. Ogden.
Emporium	Cameron	1,050	22	52.6	+ 1.5	84	6	24	31	44	1.54	− 1.61	0.62	0.4	6	12	11	8	w.	T. B. Lloyd.
Ephrata	Lancaster	384	11	55.5	+ 1.2	85	5†	23	30	42	2.30	− 0.83	0.92	0.0	6	19	1	11	w.	W. L. Frantz.
Everett	Bedford	1,080	13	54.8	+ 2.5	87	6	23	30	46	1.09	− 1.60	1.05	T.	2	14	16	1	w.	B. L. Steckman.
George School	Bucks	184	4	56.8	.....	86	6	23	31	42	3.06	.....	2.02	0.0	8	22	4	5	w.	Prof. A. C. Smedley.
Gettysburg	Adams	600	36	57.7	+ 7.0	87	6†	24	31	42	1.53	− 1.62	0.74	0.0	6	18	9	4	sw.	Col. E. B. Cope.
Gordon	Schuylkill	804	7	52.2	.....	85	6	18	30	42	1.78	.....	0.66	0.0	7	18	5	8	w.	Capt. J. G. Johnson.
Hamburg	Berks	380	19	56.8	+ 2.9	88	6	20	20†	38	1.58	− 2.41	0.94	0.0	2	24	3	4	nw.	W. J. Kalbach.
Harrisburg	Dauphin	361	22	57.9	+ 3.9	85	6	31	30	31	1.30	− 1.56	0.45	T.	7	14	12	5	nw.	U. S. Weather Bureau.
Huntingdon	Huntingdon	650	22	55.6	+ 3.7	88	6	21	31	47	1.51	− 1.50	1.00	0.0	6	16	7	8	w.	Prof. W. J. Swigart.
Hyndman	Bedford	977	4	56.4	.....	90	5	19	30	50	1.23	.....	1.00	T.	5	18	7	6	n.	H. C. Mauk.
Lawrenceville	Tioga	1,006	13	56.0	+ 6.4	86	6	20	30	42	1.17	− 1.81	0.40	T.	5	17	8	6	.....	C. P. Darling.
Lebanon	Lebanon	458	22	57.2	+ 4.3	84	6	28	30	32	1.94	− 1.92	0.80	0.0	7	16	11	4	se.	G. W. Hayes, C. E.
Lock Haven	Clinton	560	22	56.2	+ 4.0	88	6	22	30	40	1.11	− 2.05	0.46	0.0	5	11	12	8	w.	Prof. J. A. Robb.
Marion	Franklin	640	7	58.8	.....	88	6	24	31	34	1.25	.....	0.56	0.0	6	22	5	4	.....	Hon. C. B. Hege.
Mauch Chunk	Carbon	634	21	55.2	+ 3.7	85	6	22	31	41	1.52	− 2.45	0.62	0.0	7	19	5	6	w.	F. C. Wintermute.
Mifflintown	Juniata	445	7	54.6	.....	85	6	23	31	38	1.28	.....	0.55	0.0	6	14	4	13	w.	Wellington Smith.
Milford	Pike	455	8	52.4	.....	84	6	19	31	43	1.42	.....	0.50	0.0	5	16	13	2	nw.	Mrs. Alla Doughty.
Montrose	Susquehanna	1,658	7	52.2	.....	84	6	19	30	41	0.80	.....	0.24	T.	9	.....	.....	.....	.....	J. R. Beebe.
Muncy Valley	Sullivan	519	1	52.4	.....	82	6	20	29	37	1.29	.....	0.43	T.	4	20	0	11	.....	F. W. Buck.
New Germantown	Perry	873	7	58.0	.....	88	19†	23	31	47	2.07	.....	0.85	0.0	4	24	2	5	w.	Ed. C. Johnston.
Philadelphia (1)	Philadelphia	117	40	60.1	+ 3.8	84	6	35	30	26	2.90	− 0.20	2.00	0.0	11	16	5	10	nw.	U. S. Weather Bureau.
Pocono Lake	Monroe	1,662	9	50.8	.....	76	5	18	30	40	2.01	.....	1.33	T.	7	12	7	12	w.	Pocono Lake Ice Co.
Reading	Berks	280	37	58.0	+ 4.6	85	6	29	29	40	1.90	− 1.84	0.58	0.0	9	.....	.....	.....	.....	Franklin Yeager.
Scranton	Lackawanna	805	10	54.4	+ 2.0	84	6	26	30	37	0.85	− 2.25	0.38	T.	6	11	15	5	sw.	U. S. Weather Bureau.
Selinsgrove	Snyder	455	22	56.2	+ 4.1	85	6	25	30†	41	1.53	− 2.12	0.46	T.	6	0	23	8	se.	J. M. Boyer, C. E.
State College	Center	1,191	22	54.2	+ 3.7	83	6	27	30	35	1.72	− 1.18	1.08	T.	8	.....	.....	.....	sw.	Prof. Wm. Frear.
Towanda	Bradford	754	16	54.0	+ 3.4	83	6	21	30	42	0.62	− 2.69	0.27	T.	4	12	9	10	nw.	Hiram E. Bull, C. E.
Wellsboro	Tioga	1,327	33	52.6	+ 3.6	85	6	20	29	49	0.99	− 2.55	0.33	T.	7	12	16	3	nw.	O. L. White.
West Chester	Chester	455	55	57.4	+ 3.3	85	1	27	30	42	3.14	− 0.74	1.36	0.0	9	19	4	8	w.	J. C. Green, D. D. S.
Williamsport	Lycoming	530	20	56.7	+ 5.0	85	6	27	30	36	0.92	− 2.53	0.40	0.0	7	18	7	6	n.	Henry H. Guise.
New Jersey.																				
Asbury Park	Monmouth	22	22	59.0	+ 3.4	83	1	29	30	32	2.42	− 1.36	1.46	0.0	7	15	8	8	sw.	B. H. Obert.
Atlantic City	Atlantic	16	37	59.0	+ 1.6	83	16	30	30	29	2.73	− 0.57	1.26	0.0	8	17	6	8	nw.	U. S. Weather Bureau
Bayonne	Hudson	50	20	58.0	+ 2.7	86	5†	31	30	33	3.97	+ 0.32	3.01	0.0	5	16	8	7	w.	J. H. Eadie.

TABLE 1.—*Climatological data for October, 1910. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New Jersey—Cont'd.																				
Belvidere	Warren	289	19	55.6	+ 3.1	85	6	21	30	39	2.12	− 1.72	0.84	0.0	5	16	7	8	.....	S. J. Hixson.
Bergen Point	Hudson	37	13	.....	.....	.....	.....	.....	.....	.....	2.38	− 1.46	1.53	0.0	5	.....	.....	.....	.....	Dr. W. H. Mitchell.
Boonton	Morris	413	20	.....	.....	.....	.....	.....	.....	.....	3.73	− 0.02	2.41	0.0	8	16	8	7	nw.	Foster Peer.
Bridgeton	Cumberland	30	29	59.4	+ 2.7	89	6	28	30†	37	3.28	− 0.17	2.41	0.0	7	.....	.....	.....	nw.	H. A. Jorden.
Burlington	Burlington	12	26	.....	.....	.....	.....	.....	.....	.....	3.65	− 0.04	2.45	0.0	7	15	7	9	.....	D. S. B. McCoy.
Canton	Salem	24	16	.....	.....	.....	.....	.....	.....	.....	5.55	+ 2.25	3.43	0.0	9	18	8	5	sw.	J. H. Maskell.
Cape May City	Cape May	17	26	60.4	+ 2.8	82	16	36	30	27	2.38	− 2.03	1.20	0.0	4	15	8	8	nw.	U. S. Weather Bureau.
Charlotteburg	Passaic	719	18	54.1	+ 3.2	83	6	18	21	42	2.77	.....	1.65	0.0	6	.....	.....	.....	.....	G. S. Briggs.
Chatham	Morris	234	8	.....	.....	.....	.....	.....	.....	.....	3.71	+ 0.32	2.73	0.0	6	16	7	8	nw.	M. A. Butler.
Clayton	Gloucester	126	17	58.1	+ 3.0	90	6	27	31	39	3.86	+ 0.34	2.89	0.0	8	15	9	7	nw.	W. T. Farley.
College Farm	Middlesex	100	15	56.8	+ 3.0	85	6	26	30	38	1.62	.....	0.67	T.	4	14	10	7	nw.	G. B. Thrasher.
Culver's Lake	Sussex	848	9	.....	.....	.....	.....	.....	.....	.....	2.30	− 1.70	1.09	0.0	5	12	10	9	.....	B. E. Riker.
Dover	Morris	575	26	52.2	+ 1.5	81	6	22	31	37[a]	3.23	− 0.59	2.00	0.3	7	14	9	8	w.	W. C. Harris.
Elizabeth	Union	33	31	58.6	+ 3.3	85	6	30	31	33	2.41	− 1.04	1.38	0.0	8	16	8	7	w.	W. M. Oliver.
Flemington	Hunterdon	187	22	57.1	+ 3.0	86	6	24	31	41	3.27	+ 0.13	2.34	0.0	9	17	5	9	nw.	H. E. Deats.
Haddonfield	Camden	80	12	.....	.....	.....	.....	.....	.....	.....	4.28	+ 0.78	3.25	0.0	8	.....	.....	.....	.....	C. F. Richardson.
Hammonton	Atlantic	85	18	57.3	+ 3.6	87	6	25	31	41	4.39	+ 0.16	3.30	0.0	7	15	7	9	sw.	Orville Bassett.
Hightstown	Mercer	106	24	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ernst Wenger.
Imlaystown	Monmouth	76	21	57.1	+ 2.7	87	6	22	30	44	4.31	+ 0.73	2.18	0.0	8	15	8	8	sw.	Dr. F. C. Price.
Indian Mills	Burlington	15	12	58.8	+ 3.2	85	5†	32	30	33	3.20	− 3.55	2.32	0.0	6	14	9	8	sw.	James Armstrong.
Jersey City	Hudson	54	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. K. Pearson, jr.
Lakewood	Ocean	95	24	56.4	+ 2.8	84	6	24	31	40	3.25	− 0.62	2.13	0.0	6	16	7	8	nw.	H. R. Major.
Lambertville	Hunterdon	550	11	52.7	+ 3.1	84	6	18	30†	45	.....	.....	.....	0.0	.....	15	7	9	s.	W. R. Bowne.
Layton	Sussex	175	7	.....	.....	.....	.....	.....	.....	.....	2.52	.....	1.45	0.0	5	.....	.....	.....	.....	W. C. Hursh.
Little Falls	Passaic	30	3	59.2	.....	84	1	28	30	36	2.52	.....	1.17	0.0	7	16	6	9	nw.	A. Sweetman.
Long Branch	Monmouth	312	8	.....	.....	.....	.....	.....	.....	.....	1.90	.....	0.90	0.0	4	.....	.....	.....	.....	B. B. Bobbit.
Mahwah	Bergen	71	48	58.0	+ 3.8	86	6	28	31	35	3.05	− 0.59	2.18	0.0	7	15	7	9	nw.	C. L. Barker.
Moorestown	Burlington	140	67	58.0	+ 3.5	87	6	30	31	34	3.64	− 0.13	2.43	0.0	8	12	10	9	nw.	J. C. Beans.
Newark	Essex	61	57	57.0[d]	+ 2.4	86[e]	6	25[d]	31	41[f]	3.60	+ 0.01	3.00	0.0	4	15	8	8	.....	Prof. Wm. Wiener.
New Brunswick	Middlesex	678	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. T. Woerner.
Newton	Sussex	.....	3	.....	.....	.....	.....	.....	.....	.....	3.07	.....	1.59	0.0	9	.....	.....	.....	.....	B. H. Kienbaum.
Northfield	Atlantic	110	39	57.0	+ 2.6	87	6	26	31	38	2.72	− 1.43	1.82	0.0	5	13	10	8	sw.	W. L. Flick.
Paterson	Passaic	196	13	56.0	+ 3.1	86	6	25	31	39	2.26	− 1.24	0.94	0.0	6	16	7	8	w.	H. A. Probert.
Phillipsburg	Warren	100	24	56.0	+ 3.0	86	5	24	31	42	2.57	− 1.08	1.50	0.0	7	11	11	9	ne.	D. W. Smith
Plainfield	Union	26	12	.....	.....	.....	.....	.....	.....	.....	3.03	− 0.59	1.48	0.0	9	17	6	8	.....	John Neagle.
Pleasantville	Atlantic	195	8	.....	.....	.....	.....	.....	.....	.....	2.43	.....	1.46	0.0	6	.....	.....	.....	.....	L. Van Gilder.
Pompton Plains	Morris	68	47	.....	.....	.....	.....	.....	.....	.....	3.51	− 0.19	2.65	0.0	9	15	8	8	nw.	M. S. Taylor.
Rancocas	Burlington	70	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Spencer Haines.
Rivervale	Bergen	76	27	56.2	+ 2.8	88	5	23	31	42	2.40	− 1.01	1.30	0.0	8	16	6	9	nw.	G. S. M. Holdrum.
Somerville	Somerset	200	40	55.3	+ 2.4	82	5†	28	31	32	2.78	− 1.03	1.64	0.0	5	14	8	9	sw.	P. Hardcastle.
South Orange	Essex	442	20	56.4[b]	+ 4.2	83[b]	6	.....	.....	43[b]	1.55	− 1.86	0.54	0.0	4	14	9	8	nw.	Dr. W. J. Chandler.
Sussex	Sussex	60	38	59.3	+ 2.8	89	6	29	30	38	4.63	+ 0.89	2.70	0.0	6	16	8	7	nw.	Prof. W. H. Seeley.
Trenton	Mercer	23	17	57.7	+ 2.9	83	11	22	30	35	4.55	+ 0.88	3.10	0.0	8	18	6	7	nw.	Paul H. Wendel.
Tuckerton	Ocean	118	41	58.2	+ 2.8	87	6	26	30	38	4.19	+ 0.71	3.07	0.0	7	15	8	8	nw.	F. R. Austin.
Vineland	Cumberland	43	19	58.2	+ 2.6	85	6	25	30†	36	3.69	+ 0.31	2.15	0.0	9	17	6	8	.....	Alfred Chalmers.
Woodbine	Cape May																			Prof. H. A. Dodge.
West Virginia.																				
Bayard	Grant	2,500	8	52.6[a]	.....	84[a]	5†	20[a]	23†	48[a]	2.00	.....	0.65	1.6	9	22	2	7	w.	Solomon Clark.
Burlington	Mineral	875	15	57.4	+ 4.3	88	5	18	30	47	0.80	− 1.14	0.50	T.	3	15	15	1	nw.	J. W. Vandiver.
Franklin	Pendleton	.....	3	56.7	.....	89	1	18	30	41	2.22	.....	1.42	1.0	4	21	5	3	.....	A. A. Martin.
Lost City	Hardy	.....	4	56.6	.....	83	5	22	30	44	1.65	.....	0.78	T.	6	23	3	5	w.	B. D. Hinegardner.
Martinsburg	Berkeley	435	19	56.9	+ 2.7	88	6	27	30†	40	1.76	− 0.71	0.87	0.0	6	24	3	4	nw.	G. W. Van Metre, C. E.
Moorefield	Hardy	900	14	58.6	+ 3.8	89	5	27	24†	44	1.15	− 0.80	0.75	T.	3	13	16	2	s.	John C. Fisher.
Romney	Hampshire	824	14	57.2	+ 2.0	91	5	25	30	43	1.33	− 0.89	0.60	T.	5	19	6	6	w.	John C. Linthicum.
Upper Tract	Pendleton	1,230	12	57.8	+ 2.5	84	5	19	30	47	1.72	− 0.40	0.56	0.5	8	13[a]	10[a]	7[a]	w.	J. M. Mallow.
Maryland.																				
Annapolis	Anne Arundel	45	32	59.4	+ 1.3	84	15	31	20	31	3.72	− 0.03	1.60	T.	6	22	4	5	nw.	W. M. Abbott.
Bachmans Valley	Carroll	860	17	58.7	+ 6.0	90	6	26	30	40	2.20	− 1.50	0.75	0.0	5	23	3	5	n.	Elmer E. Yingling.
Baltimore	Baltimore	115	40	60.8	+ 3.3	93	1	42	30	30	2.71	− 0.31	0.85	0.0	10	19	7	5	sw.	U. S. Weather Bureau.
Cambridge	Dorchester	25	12	62.2	+ 3.7	91	6	30	31	36	6.04	+ 2.59	3.34	0.0	8	19	6	6	s.	T. E. Keenan.
Cheltenham	Prince George	230	10	60.8	.....	86	11	30	30	35	4.08	.....	1.77	0.0	8	17	9	5	nw.	J. E. Burbank.
Chestertown	Kent	80	25	59.3	+ 3.5	83	11	31	30	33	3.66	+ 0.67	2.45	0.0	5	23	4	4	s.	M. W. Thomas.
Chewsville	Washington	530	13	57.9	+ 3.6	89	6	23	20	39	1.18	− 1.71	0.40	T.	7	20	10	1	nw.	D. Paul Oswald.
Clear Spring	...do	650	13	.....	.....	87	5†	.....	.....	.....	1.31	− 1.48	0.65	T.	7	21	7	3	nw.	W. W. Frantz.
Coleman	Kent	80	12	60.9	.....	86	1	32	30†	35	3.12	+ 0.10	2.36	0.0	5	23	1	7	sw.	J. S. Harris.
College Park	Prince George	170	20	60.2	+ 4.6	92	1	24	31	44	4.23	+ 1.48	2.17	0.0	7	18	11	2	nw.	Prof. H. J. Patterson.
Cumberland	Allegany	700	36	.....	.....	.....	.....	.....	.....	.....	1.20	− 1.18	0.95	0.0	4	.....	.....	.....	.....	J. W. Frantz.
Darlington	Harford	300	18	58.0	+ 3.8	88	1	26	30	34	2.71	− 0.59	1.19	0.0	6	20	4	7	nw.	Prof. A. F. Galbreath.
Denton	Caroline	42	15	59.5	+ 3.4	84	1†	28	30	39	4.75	+ 1.55	2.93	0.0	7	22	1	8	s.	H. B. Mason.
Easton	Talbot	35	19	60.0	+ 3.2	84	6†	31	31	23	7.24	+ 4.15	5.13	0.0	7	22	5	4	nw.	Henry Shreve.
Emmitsburg	Frederick	720	37	61.1	+ 6.8	90	1	33	29	37	1.45	− 2.34	0.65	0.0	6	24	3	4	w.	Jno. H. Eckenrode.
Fallston	Harford	450	40	58.7	+ 4.2	89	1	26	30	34	2.36	− 1.25	0.88	T.	7	7	22	2	nw.	J. H. Curtiss.
Frederick	Frederick	275	33	59.2	+ 4.1	88	1	28	31	25	2.88	+ 0.30	0.96	T.	8	24	2	5	se.	Henry Trail.
Frostburg	Allegany	1,929	9	57.4	.....	87	5†	21	30	37	1.10	.....	0.70	T.	10	19	10	2	.....	L. B. Abbott.
Great Falls	Montgomery	200	19	59.2	+ 4.0	90	1	24	30	37	3.65	+ 0.99	1.55	0.0	6	20	6	5	nw.	J. W. Bissett.
Green Spring Furnace	Washington	450	18	59.9	+ 6.5	89	5†	24	31	43	1.44	− 1.17	0.71	T.	7	25	2	6	w.	E. G. Kinsell.
Keedysville	...do	400	6	59.6	.....	90	6	23	30	42	1.52	.....	0.56	0.3	7	25	3	3	nw.	J. A. Miller.
Lake Montebello	Baltimore	.....	1	59.2	.....	89	1	30	30†	32	2.34	.....	0.80	0.0	10	21	3	7	w.	Martin L. Dobler.
La Plata	Charles	190	1	59.4	.....	87	1	26	30	41	4.19	.....	1.35	0.0	8	24	0	7	sw.	Prof. R. H. Lee Reich.
Laurel	Prince George	150	16	57.2	+ 1.9	88	1	23	31	40	2.57	− 0.56	1.40	0.0	5	21	8	2	.....	Dr. T. M. Baldwin.
Monrovia	Frederick	630	23	58.4	+ 3.5	88	1	26	30	32	2.94	+ 0.05	0.89	0.0	7	21	7	3	nw.	J. H. Lawson.
Pocomoke City	Worcester	37	17	61.0	+ 1.4	84	6	21	31	27	4.47	+ 1.30	2.47	0.0	6	23	2	6	nw.	Hon. R. M. Stevenson.
Porto Bello	St. Mary	38	5	61.6[a]	.....	89[a]	6	30[a]	30	22[a]	5.75	.....	4.30	0.0	3	22[a]	0[a]	8[a]	nw.	Alpheus Hyatt.
Princess Anne	Somerset	17	17	58.8	+ 2.4	85	6	27	31	34	6.27	+ 2.92	3.22	T.	8	8	18	5	nw.	Jas. R. Stewart.
Rockville	Montgomery	421	3	57.0[b]	.....	82[b]	15†	27[b]	30	34[b]	4.26	.....	1.10	0.0	.....	.....	.....	.....	.....	Dr. Geo. E. Lewis.
Salisbury	Wicomico	23	5	60.2	.....	87	6	26	31	29	6.29	.....	3.30	T.	10	15	13	3	sw.	W. E. Downing.
Sanatorium	Frederick	1,200	2	57.3	.....	83	5	25	30	20	1.85	.....	0.65	T.	7	22	2	7	sw.	Dr. W. M. Garrison.
Solomons	Calvert	20	19	62.4	+ 2.8	87	6	34	30	26	5.29	+ 2.44	2.57	0.0	10	9	16	5	nw.	Dr. W. H. Marsh.
Sudlersville	Queen Anne	65	11	59.4	+ 2.4	87	1†	29	30†	39	4.67	+ 1.79	2.85	0.0	9	17	8	6	w.	Jas. E. Higman.
Takoma Park	Montgomery	320	12	57.0	+ 1.6	87	1	27	30	35	4.50	+ 1.60	2.33	0.0	8	14	13	4	.....	L. M. Moores.
Taneytown	Carroll	450	11	57.6	.....	90	1	20	31	43	2.17	− 0.30	1.13	0.0	5	27	2	2	nw.	R. A. Nusbaum.
Towson	Baltimore	465	2	58.7	.....	88	1	24	30	39	2.21	.....	0.75	0.0	7	24	2	5	nw.	C. W. E. Treadwell.
Van Bibber	Harford	100	13	57.0	+ 1.5	87	1	24	31	38	1.57	− 2.19	0.67	0.0	8	17	10	4	nw.	W. Benj. Ford.
Westernport	Allegany	1,000	16	57.8	+ 5.3	89	5†	18	30	46	0.98	− 1.08	0.60	1.0	6	.....	.....	.....	.....	Prof. O. H. Bruce.
Woodstock	Baltimore	392	36	60.0	+ 6.1	87	1	27	31	33	2.71	− 0.58	0.91	0.0	9	20	6	5	w.	Rev. A. J. Donlon, S. J.
Delaware.																				
Delaware City	New Castle	20	8	59.0	.....	84	5	30	29†	29	2.86	.....	2.01	0.0	3	23	3	5	nw.	H. Morton Price.

TABLE 1.—*Climatological data for October, 1910. District No. 1*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Delaware—Cont'd.																				
Dover	Kent	40	22	60.0	+ 3.8	87	1†	28	30	34	4.92	+ 1.75	3.30	0.0	7	20	5	6	w.	Thos. F. Dunn.
Milford	...do	20	26	63.0	+ 1.3	86	6	28	30	34	5.10	+ 1.65	2.96	0.0	9	20	7	4	nw.	C. J. Holzmueller.
Millsboro	Sussex	20	18	60.1	+ 3.4	88	6	27	31	37	5.81	+ 2.10	2.80	0.0	7	21	3	7	nw.	Rev. L. W. Wells.
Seaford	....do	40	17	59.7	+ 3.5	84	5†	29	30†	30	8.26	+ 4.96	5.47	0.0	5	19	6	6	w.	E. B. Brown.
District of Columbia.																				
Washington	District of Columbia	112	40	60.2	+ 3.6	93	1	31	30	34	5.74	+ 2.65	3.67	0.0	9	20	3	8	nw.	U. S. Weather Bureau.
Virginia.																				
Culpeper	Culpeper	450	2	58.0	.....	86	1	26	31	39	4.54	.....	2.38	0.0	4	11	15	5	nw.	Col. H. C. Burrows.
Dale Enterprise	Rockingham	1,350	30	57.2	+ 2.2	85	1	18	30	48	3.33	+ 0.54	1.27	T.	6	18	10	3	s.	Rev. L. J. Heatwole.
Doswell	Hanover	134	9	61.6	.....	89	20	24	30	35	3.43	.....	1.17	0.0	6	17	11	3	s.	Rich., Fdksbg. & Pot. R. R.
Eastville	Northampton	15	....	63.4	.....	85	6	39	31	27	4.58	.....	2.02	0.0	8	22	3	6	sw.	Thos. B. Robertson.
Fredericksburg	Spottsylvania	100	21	60.8	+ 3.6	90	1	25	30	41	5.05	+ 1.40	1.50	0.0	8	19	8	4	nw.	S. G. Howison.
Lincoln	Loudoun	500	9	60.2	.....	93	1	20	31	51	4.48	.....	1.30	0.0	7	20	7	4	nw.	Dr. Geo. Roberts.
Mount Weather	...do	1,726	6	55.8	+ 4.3	83	1	25	30	29	3.73	+ 1.31	1.32	T.	8	16	8	7	w.	U. S. Weather Bureau.
Quantico	Prince William	16	13	.....	.....	.....	.....	28	30	.....	5.45	.....	3.15	0.0	7	.....	.....	.....	nw.	Rich., Fdksbg. & Pot. R. R.
Staunton§§	Augusta	1,380	18	58.3	+ 2.5	86	16	24	30	40	3.65	+ 0.59	1.42	T.	6	18	9	4	sw.	Ernest Nothnagel.
Stephens City	Frederick	710	18	58.8	+ 3.0	90	1	21	30	45	.....	.....	.....	0.0	....	22	3	6	sw.	B. T. Argenbright.
Warsaw	Richmond	160	18	62.2	+ 4.8	88	6	28	30	34	7.39	+ 4.22	4.34	0.0	7	17	10	4	e.	C. H. Constable.
Woodstock	Shenandoah	927	14	60.0	+ 2.3	93	1	23	30	46	2.01	+ 0.77	0.77	T.	9	18	9	4	w.	Miss A. G. Miley.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
¶ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 1, North Atlantic States.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Maine.																															
Bar Harbor	Coast	.45								T.	.10				T.						T.		T.	.20		T.	T.	.05	.03	.02	.15		1.01
Cornish	Saco	.25				T.		.30		.05						.42	.05				.20		.10	.18		.34		.26	.04	.03			2.04
Danforth	Penobscot	.10	.10					.15		T.	.15				.10		.22				T.	.10		.33		T.	.15	.10	.12					1.62
Eastport	Coast	.20			.01	T.		.06		.61	.02				.08	.02	.06				.17		T.	.33		.02	.04	.13		.08	.02		1.85
Ellsworth	do		.22						.22	T.	.05				T.		.15	.08				.11		.22	.09		.65	.01	.28		.41		2.49
Fairfield	Kennebec								.04							.08							.18			.23		.26		.31			1.10
Farmington	do	.17				T.		.15									.07						.04	.25		.03		*	.31		.17		1.19
Gardiner	do	.60				T.		.28		.03						.11	.07					.14		.19			.36	.34	.02	.01	.11		2.26
Greenville	do	.17			T.	.14		.06			T.				.06	.04	.16				.08		.21	.11		.08	.64	.20		.18	T.		2.13
Houlton	St. John					.10									.30						.25			.30				.50		.25			1.65
Lewiston	Androscoggin	.16				T.		.28								.16	.05				.06		.02	.19		T.	.25	.33	.07	.03	.09		1.69
Madison	Kennebec	.21				.01		.22								*	.08						*	.21			.32	.35	.02	.09			1.51
Millinocket	Penobscot		.10			.08	.09			.12					.05		.15	.04				.10		.20	.05		.96	*	.27		T.		2.21
North Bridgeton	Saco	.11						.03								.19	.66						*	.32		.32		.53		.07			3.13
Oquossoc	Androscoggin	.80		.60													.10							.40			.40	.30					2.60
Orono	Penobscot	.08			.01	.01		.16		.01					.02	.08					.10			.42			1.32	.20		.15			2.56
Patten	do	.09	.08			.05	.17				.08				T.		.21				.02			.45			1.33	.08	.42				2.98
Portland	Coast	.12						.33								.13					.01		.09	.16		.28		.14	T.	.01			1.27
Presque Isle	St. John	T.			T.	.48	.14	.04		T.	.04				.10		.13			.09	.09	T.		.15	.05	.18	1.00	.30	.05	.01			2.87
Rumford Falls	Androscoggin	.22				.02		.15															.16	.15		.30	.05	.31		T.			1.36
The Forks	Kennebec	.20				.30																	*	.45		*	.60	.45		*	.35		2.35
Winslow	do	.07				.06		.18								.07					.07			.20		.22		.29	.04	.25			1.46
New Hampshire.																															
Alstead Center	Connecticut	T.						.28		.10	.06										.23	.08	.20	.35		T.	.26	.16	T.					1.72
Benton	do	.38						.18		.68	.10					.22							T.	.40		.13		.51						2.00
Bethlehem	do	.24	.11		T.	.09		.03			T.					.02							.09	.16		.06	.31	.14	.06					1.31
Brookline	Merrimac	.48						.15		.30						.02							.35			.23		.05						1.68
Concord	do	.08				T.		.28		.01						.05					.03		.33	.12		.08		.05						1.03
Durham	Coast							.36							.06								.64	.12		.44	.02							1.64
Franklin	Merrimac	.10						.26		.04	.02					.04	.03				.04		.19	.19		.03	.02	.07	.03					1.06
Grafton	do	.08						.06		T.	.06					T.					.02		.15	.16		.05		.16	.01					0.75
Hanover	Connecticut	.32						.04		.09						.10					T.		.22	.12	T.	.06	.02	.10	.04					1.12
Keene	do	T.						.30		.17					T.	T.					T.	.05	.15	.40		T.	.09	.35	.20					1.41
Nashua	Merrimac	.29						.17		.03						.10					T.	T.	.24	.14		.24		.03						1.34
Newton	do	.52						.30		T.						.02							.52	T.		.52			.16					2.04
Plymouth	do	.26						.06		T.						.26	.03						.18	.23		T.	.04	.38	.04	T.				1.48
Vermont.																															
Bloomfield	Connecticut	.79	.07			.08						.05		.01		.06						.01	.10	.15	.03	.06		.42		.14				2.07
Cavendish	do	.10						.10		.08					.03						T.		.25					.42	.01					0.99
Chelsea	do	.25						.05		.10					T.	.06							.40	T.		.35		.30	.08	.30				1.89
Jacksonville	do	.10						.05	.07										.10	.13	.15	.10	.05			T.		.10	.07					0.83
Manchester	Hudson	.13								T.													.29	.59		.31	T.	.57						1.89
St. Johnsbury	Connecticut	.12	.05			.10	.02	.04			.07				T.	.05	T.						.11	.17	T.	.13	.17	.41			T.			1.44
Vernon	do	.21						.35		.18													.55					.12						1.41
Woodstock	do	.28						T.		.20						T.							*	.41	.04	.05		.48	T.					1.46
Massachusetts.																															
Amherst	Connecticut							.34		.15						.02							.29	.03				.07	.03					0.93
Ashland	Merrimac							.10		.42						.10					.07		.57			.38		*	.07					1.71
Bakers Bridge	do								T.															.60			.28		.06					0.94
Bedford	do							.27	.02	.15						.06					T.	T.	.15	.34		.30								1.29
Blue Hill	Coast				T.			.18	.01	.26	.02				T.	.20	.01				.16	T.	.07	.54		.10		.01	.08					1.64
Boston	do							.14		.11					T.	.03	.02				.01		.42	.13		.20		.06	.02					1.14
Chestnut Hill	do							.21		.31						.11					.06		.69			.21		.10						1.69
Clinton	Merrimac							.25		.58						.05						.01	.44	.65		.35			.15					1.88
Concord	do							.25	.01	.25	.01					.07	T.						.09	.42		.41	.05	T.	.09					1.65
Fall River	Coast	.02						.20		.02						.23					.62		.35	.10				.01	.19					1.74
Fitchburg	Merrimac							.17		.37						.09							.10	.18		.28		.09	.06					1.34
Framingham	do							.13		.47					.01	.19					.11		*	.56		.35			.06					1.88
Haverhill	do	.29	.13					.25	.02	T.	.01					.02	.01						.04	.57	T.	T.	.43	T.	.11	.01				1.89
Hingham	Coast							.27		.27					T.	.26					.20		.65	T.		.05								1.70
Hyannis	do						*	.20		*	.12					.85	.10				.89		*	.36		*	.05		.35					2.92
Jefferson	Merrimac							.20		.24						.07							.34			.13		.25						1.23
Lake Cochituate	do							.12		.39						.11					.03		.62			.47			.06					1.80
Lawrence	do	.15						.19		.01						.11							*	.46		.49		*	.15					1.56
Leominster	do							.20		.40						.03							.09	.33		.18		.09	.03					1.35
Lowell	do							.22		.08						.01							*	.47		.32		.08						1.18
Middleboro	Coast							.21		.22						.17	T.				.64		*	.41		T.			.12					1.77
Monson	Connecticut							.05		.05											.05		.15	.15		.15		.20	.25					1.05
Nantucket	Coast							.10	.04	.32	.01					.01					3.86		.02	.04		T.	.01	T.	.31					4.72
New Bedford	do																																
Norfolk	do							.06	.22	T.						.45					.18		T.	.48			.08		.37					1.84
Northampton	Connecticut							.35		.18						.06							.33											0.92
Plymouth	Coast							.40		.04						.11	T.				.66			.44				.13		T.				1.78
Princeton	Merrimac							.18		.42						.08							.31			.16		.21						1.36
Provincetown	Coast							T.	.25							.12					.90			.38					.55					2.20
Rockport	do	.15	.35					.25									.10							.91			.25		.10					2.11
Rutland	Connecticut							.20		.18					T.	T.							*	.35		.15		*	.45					1.23
Somerset	Coast							.26		.05						.47					.64		.59			.06			.17					2.24
South Egremont	Housatonic						.07	.18		.15													.45			T.		.33						1.18
Spot Pond	Coast							.15		.08						.07					.02		.52			.17		.10	.02					1.13
Sterling	Merrimac							.20		.45						.08							.31			.39			.08					1.51
Taunton	Coast							.13		.17					T.	.16	T.				.57		*	.50			T.			.23					1.76
Turners Falls	Connecticut							.29		.10						T.					T.		*	.43		T.		*	.19					1.01
Westboro	Merrimac							.15		.26						.13					.03		*	.45		.40			.09					1.51
Williamstown	Hudson	.15						.14		.2													.80	.14		.05		.39	.14					2.32
Winchendon	Connecticut	T.						.21		.23													.20	.22		.05		.06	.14					1.11
Worcester	Coast							.27		.11					T.	.11					.07		.12	T.		.68		.02	.04					1.42
Rhode Island.																															
Block Island	Coast							.29		.11						.04					1.17		.48			T.		.04	.24					2.37
Bristol	do							.24		T.						.16					.57		*	.59			.02	*	.12					1.71
Greene	do																																
Hope Valley	do							.11	.04	.09						T.	.08				.58		.21	.61		.09		T.	.18					1.99
Kingston	do							.21		.10						.09					.70		.79			.05		.07	.08					2.09
Narragansett Pier	do							.20	.02	.04						.04	.05				.76		.28	.44		.01	.02	.02	.20					2.08
Pawtucket	do							.20		.01					T.	.29	T.				.43		*	.46		.06			.05					1.50
Providence	do							.24		.02						.39					.51		.31	.03		.03		.02	.05					1.60
Wallum Lake	do							.05		.17						.50					.21		.42			.53		.20						2.08
Connecticut.																															
Bridgeport	Coast							.19	T.	T.						T.					.58		.43	.05		T.		T.						1.25
Canton	Connecticut							.28		.12						T.					.17		.26			T.		.19						1.02
Colchester	Coast							.06		.12						.02					.68		.34	T.		.05			.39					1.66
Cream Hill	Housatonic							*	*	.09						.05					.07	.02	.81	.01		.02		.17	.14					1.38
Danielson	Coast									.05						.25					.50		.47			.40			.21					1.88
Falls Village	Housatonic							.38		.05				.03							.03		.43					.20						1.12

TABLE 2.—*Daily precipitation for October, 1910. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Connecticut—Cont'd.																																	
Hartford	Connecticut	T.						.13		.12					T.	.01					.13		.19	T.		T.		.04	.15				0.77
Hawleyville	Housatonic							.16													.20		.15	.12					.15				0.78
Lake Konomoc	Coast																				.62			.45		.05							1.12
New Haven	do							.09		.10						.01					.51		.31			T.		.05	.08				1.15
New London	do	T.						.05									.15				.80		1.20			.04		.34					2.58
North Grosvenordale	do							.05	.03	.10						.07					.14		.55			.35			.20				1.49
Norwalk	do							.20								.05					.50		.48					*	.10				1.33
Southington	do							.15	T.	T.						T.					.10		.10	.05					.15				0.55
South Manchester	Connecticut							.09		.23						.06					.11		.20				.42						1.11
Storrs	Coast							.05								.07					.29		.21			.59		.21					1.42
Voluntown	do							.13		.17						T.					.62		.05	.32			.05		.32				1.66
Wallingford	do						.02	.09		.11							T.			.17	.14		.18					.20					0.91
Waterbury	Housatonic							.20		.19						.04					.10		.26	T.		T.		.19					0.98
West Simsbury	Connecticut							.28		.20						.03					.12		.22			T.		*	.13				0.98
New York.																																	
Addison	Susquehanna					T.	.16	.29															.24			.49		.15		T.	T.		1.33
Albany	Hudson							.14		.17						.12					T.		.48	T.		.04		.02	T.	T.			0.87
Alfred	Susquehanna	.02				T.	.40	.30															.52	.14		.67		.45	.09	.05			2.64
Amsterdam	Mohawk					T.	.10			.17													.45	.05		.37		.25	T.				1.39
Athens	Hudson							.40		.10						T.					.01		.38	T.		T.		T.	T.				0.89
Ballston Lake	do					T.		.15		.17						T.					T.	.03	.46	.19	.02	.15	.04	.15	T.	T.			1.36
Bedford	Coast							.26													.91		.72	.05					.40				2.34
Binghamton	Susquehanna						.08	.04					T.								.78		.26	.01		.22	T.	.07		T.			1.46
Bouckville	do							.50		.02													.21	.09	.07	.25		.32	.03	.15			1.64
Carmel‖	Hudson							.20	.09												.08	.07		.43					.20				1.07
Chatham	do							.37		.17						.03							.29	.13		T.		T.	.03				1.02
Cooperstown	Susquehanna						.14			.08													.40	.12	.10	.11	.15	.16	.02	.03			1.32
Corinth‖	Hudson									.32														.52		.11		.32		T.			1.27
Cortland	Susquehanna					.01		.60															.33	.07		.45	.10	.10		.10	.03			1.79
Cutchogue	Coast							.12		.18						T.					1.51		.39	T.		.11		T.	.16				2.47
De Ruyter	Susquehanna					.04	T.	.56			T.												.20	.32		.39	.05	.24	.39	.13	.05			2.47
Easton	Hudson	.05								.24													.54			.30		.24		T.				1.37
Elmira	Susquehanna						.27																			.74	.02							1.03
Fort Hunter‖	Mohawk																																
Fort Plain	do							.11		.29						T.							.40	.16		.17		.38	T.				1.51
Glens Falls	Hudson	.05						.02		.30						.05							.25			.32		.38	.02	.17			1.56
Gloversville	Mohawk		T.			.05		.10		T.						T.							.60	.20		.20		.38	.04				1.57
Greenfield Center	Hudson					.04				.11													.50	.15		.25		.05	.07	T.			1.17
Greenwich	do	.04						.05		.32	.03				T.	.01							.30	.16		.15	.07	.20		.01	T.			1.34
Griffin Corners	Delaware																																
Haskinville	Susquehanna			T.		T.	.40	.28													T.		.37	T.	T.	.63	T.	.20	.13		T.		2.01
Homer	do					.01	.49	.14									T.						.50	.08		.52		.15	.01	.01	.02		1.93
Hoosick Falls‖	Hudson	T.	T.			T.		.08	.07	.05	.32						.04					.24	.08	.60		T.	.26	.02	.71	.13	.02		2.53
Indian Lake	do					.10	.40	.20		.40	.05												.20	.10		.15		.40					2.00
Jeffersonville	Delaware							.24		T.						T.					T.		.60	T.		.06		.05		T.			0.35
Lake Pleasant	Hudson	.20				T.		.30		.10													.50			.30		.70	.10	.10			2.30
Liberty	Delaware					.20		.10													.15		T.			.30		1.00					1.75
Little Falls	Mohawk					.03		.30		.43													.30	.13		.20		.42	.05				1.86
Mohonk Lake	Hudson				.58			.40												.17				*	.45								1.60
Morehouseville	Mohawk	.35				.20		.40		.30													.50			.70		.80	.25	.15			3.65
Mount Hope	Coast							.30	T.												.35		.60										1.25
Newark Valley	Susquehanna						.01	.13															.25	T.		.52		.08					0.99
New Berlin‖	do	.02							.08								.01						.24	.15	.04	.07	.12	.08	.19	T.	.07		1.06
New Lisbon	do							.12									.05							.33		.24	.03	.12	T.	T.			0.89
New York City	Coast							.31		T.						.03				T.	3.04		.39			T.		T.	.02				2.79
North Creek	Hudson	.24								.53													.35			.23		.22					1.67
Northville‖	do	.10							.14														.52		.12	.12	.20	.25					1.45
Norwich‖	Susquehanna																						.30		.15	.08	.21	.06	.12	.12			1.04
Oneonta	do																				.15		.55			.09		.20	T.	T.	T.		0.99
Oxford	do							.11															.25	T.		.35	T.	.15	.06				1.02
Port Jervis	Delaware						.35															.28	.20					.07					0.90
Salisbury	Mohawk						.15	.50		.10													.65	.08		.22		.60	.15				2.36
Salisbury Mills	Hudson							.45													.10				.38					.01			0.94
Scarsdale	Coast							.35													.77	.50						T.					1.62
Setauket	do							.05	T.	T.						T.					1.00		.28			T.		T.	.26				1.59
Sherburne‖	Susquehanna							.13															.1	.10		.11		.21		.08			0.84
Southampton	Coast						.01	.22	.03							T.					2.19		.05	.30		.01	.10		.15				3.06
Spier Falls	Hudson							T.		.26													.40	.11				.61		T.			1.38
Trenton Falls‖	Mohawk	T.	.03				.27	.67		T.	.14												T.	.54		.10	.27	.19	.48	.19			2.88
Tribeshill‖	do									.10													.70			.30		.20					1.30
Utica‖	do										.85												.03	.50		.40	.35		.30				2.43
Wading River	Coast							.07								.02	.03				1.35		.35						.22				2.04
Wappingers Falls	Hudson							.14		.02											.15		.52			.05		.15					1.03
Warwick	do							.46													.32		.43					.20					1.41
Waverly	Susquehanna							.15															.20	.02		.43	T.	.05		.03			0.88
West Berne	Mohawk							.06		.05											T.		.09	.73		T.		.05					0.98
West Point	Hudson							.60													.05		*	.60					.10				1.35
Windham	Mohawk							.22		.04											T.		.35			.07		.08	.10				0.86
Pennsylvania.																																	
Altoona	Susquehanna						.09	.04	T.	T.											T.		.89			.03	T.	T.	T.	T.	T.			1.05
Ansonia‖	do					T.	.10	.23	.01														.28	T.	T.		.24	.05	.03	.05				1.05
Austin	do	.02				.50	.35	.31															.65			.43		.17		T.	T.			2.43
Bellefonte	do					.17			.05														1.02			.22		.05	.40					2.01
Bethlehem	Lehigh							.09		.02							T.				.83		.36			T.	.08	T.	.06					2.04
Browers Lock	Schuylkill							.30	.15	.27												1.10	.80			.15			.27					3.04
Catawissa	Susquehanna							.29		.05											T.		.47			.20		.19		T.			1.30
Center Hall	do							.07	.03														.71	.25		.20							1.26
Clearfield	do					.12		.09															.78	.33		.05		.08	T.	.02			1.17
Coatesville	Coast							.56	T.	.21											1.45		.70			.07		.08	.02				3.09
Doylestown	Schuylkill								.20	.16											1.08		.51					.06	.10				2.11
Drifton	Susquehanna							.60			.05					.10				T.	.20		.45			.25		.13		.12			1.90
Emporium	do	T.				.21	.16																.62	T.	T.	.42		.05	T.	.04			1.54
Ephrata	do						.44		.10												.92		.56			.25		.2	T.				2.30
Everett	Juniata																					1.05				.04		T.	T.	T.			1.09
Forks of Neshaminy	Delaware							.57		.17												.63	.55			.15		.10					2.43
George School	do							.31	T.	.09							T.				2.02	.02	.53				.04	.01	.04				3.06
Gettysburg	Potomac							.50	.05	.15										T.	.03		.74			T.		.06	T.				1.53
Girardville	Susquehanna						.12	.53		.06											.17	.10	.45			.27		.24					1.94
Gordon	do							.66	.02	.05											.13		.48			.23			.21				1.78
Hamburg	Schuylkill						.94													.54								.10					1.58
Hanover	Susquehanna							.47	.25												.04		.76			.05		T.					1.57
Harrisburg	do						T.	.45	.07	.03										T.	.11	T.	.43			.14		.07		T.			1.30
Huntingdon	Juniata							.16		.10											.06		1.00			.15		.04					1.51
Hyndman	Potomac							.09	.07												T.		1.00			.05		.02	T.	T.			1.23

TABLE 2.—*Daily precipitation for October, 1910. District No. 1*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Pennsylvania—Cont'd.																															
Kennett Square	Coast							.47		.16						.05					1.99		.72			.07		.06					3.52
Lancaster	Susquehanna							.61	.14											1.01			.60			.18							2.54
Lansdale	Schuylkill																																
Lawrenceville	Susquehanna				T.			.40															.20		.40		.12		.05				1.17
Lebanon	...do							.56		.09											.15		.80			.20		.9	.05				1.94
Le Roy	...do							.12		.01	.03												.29	.03		.25	.03	.08		.03			0.87
Lewisburg	...do									.14											.06		.41			.20		.10					1.01
Lloyd	...do																																
Lock Haven	...do					T.	T.	.07	.06														.46			.40		.12					1.11
Marion	Potomac							.29	.11	.06													.56			.05		.19					1.26
Mauch Chunk	Delaware							.44		.03						.03				T.	.14		.62			.21		.05					1.58
Mifflintown	Juniata							.04		.02											.22		.56			.24		.10					1.28
Milford	Delaware							.37								.01					.50		.47					.08					1.43
Montrose	Susquehanna										.10										.24		.09	.03		.16	.10	.04	.01	.03			0.80
Mountain House	Juniata							.5	.05												.17		.86			T.		.08		T.			1.21
Muncy Valley	Susquehanna								.24												T.	T.	.43	T.		.41		.21		T.			1.29
New Germantown	...do																		.58				.85			.40		.24					2.07
Ottsville	Delaware																																
Philadelphia (1)	...do							.27	.01	.03						.02	.01			.18	1.82		.50			.03		.01	01				2.90
Pocono Lake	...do							1.02		.04											.16	T.	.47			.10	T.	.14	.08	T.			2.31
Point Pleasant	...do						.26														1.42		.60					.04	.05				2.47
Pottsville	Schuylkill							1.10		.05											.38		.65			.15		.10					2.43
Reading	...do							.46	.8	.05										.09	.43	.02	.56			.10		.11					1.90
Renova‖	Susquehanna					.06	.04	.06	.02														.75			.05		.30					1.28
Scranton	...do						.2	.36															.31			.10	.01	.05					0.85
Seisholtzville	Schuylkill							.61													.74		.59					.21					2.15
Selinsgrove	Susquehanna	T.						.21		.07											.26		.46			.20		.23	T.				1.53
Shawmont	Schuylkill							.38		.19											2.40		.55			.15							3.58
Shippensburg	Susquehanna																																
Smiths Corners	Schuylkill							.45													1.29		.65					.09					2.48
Spring Mount	...do							.30		.09											1.03		.63			.08		.05	.05				2.23
State College	Susquehanna					.11	T.	.03	T.	.05											.12		1.08	.02		.30	.02						1.72
Towanda	...do							.13			T.		T.								T.		.27	T.		.18		.4		T.			0.62
Wellsboro	...do					.04	.11	.10															.33	.04		.25		.12		.12			0.99
West Chester	Coast							.74	.01	.18										.01	1.35		.70			.08		.03	.04				3.14
Wilkes-Barre‖	Susquehanna							.30	.04												.01		.33	.05			.13		.08	T.			0.94
Williamsport	...do						.06	.04	.04														.40		.06	.22		.10					0.92
New Jersey.																																	
Asbury Park	Coast							.10	.05	.31											1.46		.38			.05		.07					2.42
Atlantic City	...do							.43	.58	.21										.20	1.06	T.	.15			T.		.02	.08				2.73
Bayonne	...do	T.						.23		.10						T.					3.01		.60			T.		T.	.03				3.97
Belvidere	Delaware							.76		.04											.84		.43					.05					2.12
Bergen Point	Coast																																
Boonton‖	Passaic							.05	.16												1.03	.50		.49					.15				2.38
Bridgeton	Coast							.25	.30	.07											2.41		.40			.05		T.	.25				3.73
Burlington‖	Delaware							.23		.10											2.41		.41			.08		.05					3.28
Canton	Coast							*	*	.63										T.	2.45		.48						.09				2.65
Cape May City	...do							.28	1.06	.24										.72	2.71		.31			.03		.10	.10				5.55
Charlotteburg	Passaic							.47													1.20		.52					.19					2.38
Chatham‖	...do							.12	.25												1.40	.25		.60			.05		.10				2.77
Clayton	Coast							*	*	.64											2.73		.34			T.		T.					3.71
College Farm	...do	.03						.15		.06						.05				T.	2.89		.61			.02			.05				3.86
Culvers Lake	Delaware							.52													.67		.34	T.		T.		.09					1.62
Dover	Passaic							.51													1.09		.53			.03		.14					2.30
Elizabeth	Coast	.05						.27		.08										T.	2.00		.65			.14		.04					3.23
Flemington	...do							.28	T	.03											1.38	.08	.51			.02		T.	.11				2.41
Haddonfield	Delaware							.41	.03	.05						.06					2.34		.29			.03		T.	.06				2.27
Hammonton	Coast							*	*	.69											3.25		.26			T.			.08				4.28
Hightstown	Delaware							.42	.05	.16											3.30		.25			.03		T.	.08				4.39
Imlaystown	...do																																
Indian Mills	Coast							.17	.17	.24											3.18		.38			.03			.14				4.31
Jersey City	...do	T.						.26	T.	.01						.03				T.	2.32		.52			T.		T.	.06				3.20
Lakewood	...do																				1.74		.30			.13		*	.08				
Lambertville	Delaware	T.						.36		.04											2.13		.60			T.		.12					3.25
Layton	...do																																
Little Falls	Passaic							.28													1.45		.69			.05		.05	T.				2.52
Long Branch	Coast							.34	.04	.18											1.17		.35			.37			.07				2.52
Mahwah‖	Passaic							.35													.90		.50					.15					1.90
Moorestown	Delaware	T.						.41	T.	T.						.07					2.18		.31			.04		T.	.04				3.05
Newark	Passaic							.36		.01						.02					2.43		.78			.02		.01	.01				3.64
New Brunswick	Coast							.08		T.						T.					3.00		.50			T.		.02					3.60
Newton	Delaware																																
Northfield	Coast							.34	.53	.29											1.59	T.	.16			.03			.13				3.07
Paterson	Passaic							.20		T.											1.82		.54			.08		.08					2.72
Phillipsburg	Delaware							.65		.3											.94		.43			.13		.08					2.26
Plainfield	Coast							.36	T.	T.						.3				T.	1.50		.56			.04		.04	.04				2.57
Pleasantville	...do							.43	.41	.44											1.48		.10			.05			.12				3.33
Pompton Plains‖	Passaic							.18	.09												1.02	.44		.51			.03		.16				2.43
Rancocas	Delaware							.40	T.	.10						.02				T.	2.65		.30			.01		.01	.02				3.51
Rivervale	Coast																																
Somerville	...do							.27		.3						.7					1.30		.58			.05			.10				2.40
South Orange	...do							.25		.17						T.					1.64		.64			T.		.08					2.78
Sussex	Hudson							.45													.54		.46					.10					1.55
Trenton	Delaware							.18		.10											3.70		.50			T.		.15					4.63
Tuckerton	Coast							.33	.70	.17											2.10		.17						.08				4.55
Vineland	...do							.04	.61	.16											3.37		.25			T.		T.	.06				4.19
Woodbine	...do							.25	.52	.32											2.15	.01	.19			.03		.13					3.60
West Virginia.																																	
Bayard	Potomac							.15	.17	.02													.48			.65		.37	.05	.06	.05		2.00
Burlington	...do							.10	.20												T.		.50			T.					T.		0.80
Franklin	...do							*	.70													1.42								.10			2.22
Harpers Ferry‖	...do							.58		.29											1.0		.64						.10				1.71
Lost City	...do							.31	.16											.18			.78			.12		.10		T.			1.65
Martinsburg	...do							.45	.24											.05		.87				.05		.10					1.76
Moorefield	...do									T.										T.	.29	T.	.75				.11	T.	T.	T.	T.		1.15
Romney‖	...do		T.					.20	T.	.20											24		.60						.09	T.	T.		1.33
Upper Tract	...do	.08						.30	.22	.05											.26		.66			.10		T.			.05		1.72
Maryland.																																	
Annapolis	Coast							.20	.70	.45											1.60		.65					.12		T.			3.72
Bachmans Valley	...do							.63	.03	.18											61		.75										2.20
Baltimore	...do							.34	.55	.08										.49	.33	.04	.81			.01		.05	.01				2.71
Cambridge	...do							.27	.95	.65										.11	3.34		.28			.08			.36				6.04
Cheltenham	...do							.33	.90	.51										.08	1.77		.30			.07			.12				4.08
Chestertown	...do							.18	.28	.35										T.	2.45		.40					T.					3.66

TABLE 2.—*Daily precipitation for October, 1910. District No. 1*—Continued

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Maryland—Cont'd.																																	
Chewsville	Potomac							.35	.05	.08										T.	.04		.40			.05		.21		T.			1.18
Clear Spring	do							.09	.02	.20											.17		.65				.09		.09		T.		1.31
Coleman	do							.10	.45											T.	2.06		.44			.07		T.					3.12
College Park	do							.52	.35	.28										T.	2.17		.76			.02		T.	.13				4.23
Cumberland	do						.07	.03		.15											T.		.93							T.			1.20
Darlington	Coast							.53	.05	.11										.08	1.19	T.	.75					T.					2.71
Denton	do							.21	.82	.21										T.	2.93		.26			.09			.23				4.75
Easton	do							.20	1.02	.38											5.13		.31			.04			.26				7.34
Emmitsburg	Potomac							.51	.03	.13										T.	.09		.66			.03							1.45
Fallston	Coast							.48	.11	.12						T.				T.	.88	T.	.66			T.		.06	.05	T.			2.36
Frederick	Potomac							.73	.15	.15										.03	.74		.96			.02		T.	.10				2.88
Frostburg	do							.04	.10	.02											.07		.70			.03		.05	.05	.02	.02		1.10
Great Falls	do							.65	.03	.02											1.55		1.05						.35				2.65
Green Spring Furnace	do							.14	.18	.07										T.	.15		.71			.11		.08		T.			1.44
Keedysville	do							.52	.12	.13										T.			.56			.02		.15	.02				1.52
Lake Montebello	Coast							.40	.27	.19							T.			.02	.57	*	.80			.01		.05	.03				2.34
La Plata	do							.49	1.35	.31										.70	.67		.38			.07			.22				4.19
Laurel	do									.12										T.	1.40	T.	.50					.05					2.57
Monrovia	Potomac							.89	.12	.22										T.	.73		.84			.05		T.	.08				2.94
Pocomoke City	Coast							.15	1.01	.72										*	2.47		.12										4.47
Porto Bello	do							T.	1.00											T.	4.30		T.			T.		.45					5.75
Princess Anne	do							.12	1.34	.14										1.04	3.23		.24			.03		T.	.13	T.			6.27
Rockville	Potomac							*	1.78											*	1.02		1.10			.07		.02	.24				4.26
Salisbury	Coast	.08						.15	.70	.66										.20	3.90	.02	.26			.02			.30	T.			6.29
Sanatorium	Potomac							.48	.05	.15										T.	.09		.65			.03	T.	.38		T.		T.	1.85
Solomons	Coast						.05	.39	1.24	.14										.52	2.57		.16			.01		.03	.18				5.29
Sudlersville	do							.55	.38	.38										.05	2.85	T.	.27			.07		.02	.10				4.67
Takoma Park[1]	do							.18	.32	.60											2.33		.82	.08			.02		.15				4.50
Taneytown	Potomac								.65												.12		1.13			.22	.05						2.17
Towson	Coast							.34	.16	.22										T.	.64	T.	.75			T.		.05	.04				2.21
Van Bibber	do							.41	.18	.09						.04				.12	.67	.02	.04										1.57
Westernport	Potomac								.16												.01		.60			.10		.01		.10			0.98
Woodstock	Coast							.51	.15	.31										.01	.71		.91			.01		.06	.04				2.71
Delaware.																																	
Delaware City	Coast							T.	.47								T.			T.	2.01		.38										2.86
Dover	do							.56	.53											.05	3.30		.28			.09			.11				4.92
Milford	do							.30	.72	.68										.04	2.96	.02	.15			.04			.19				5.10
Millsboro	do							.25	1.70	.20										.45	2.80	.23							.18				5.81
Seaford	do							.27	1.25	.78										T.	5.47	T.	.32			T.			.17				8.26
District of Columbia.																																	
Washington	Coast							.61	.58	.03										.70	2.97	T.	.65			.01		.15	.04				5.74
Virginia.																																	
Culpeper	Rappahannock								2.38											1.37			.73					.06					4.54
Dale Enterprise	Shenandoah							.66	.80											.13	.42		1.27			T.		.05		T.			2.33
Doswell	Pamunkey							.46		.66										.94	1.17					.02			.18				3.43
Eastville	Coast	T.						.82	.38	.70										.21	1.81		T.				.10		.41	.15			4.58
Fredericksburg	Rappahannock						T.	.96	1.20	.29										.45	1.50		.41			.02		T.	.22				5.05
Lincoln	Potomac						.80	.28	.05												.95		1.00			1.30		.10					4.48
Mount Weather	do							1.32	.20											.40	.17	.12	1.15			.16		.10		T.			3.73
Quantico	do							.18	1.58	.23										.18	2.97		.11			.20		T.					5.45
Staunton	Shenandoah						T.	.90	1.42											.92		.29				T.		.12		T.			3.65
Stephens City	Potomac																																
Warsaw	Rappahannock						T.	.90	.92	.75										.52	3.82	T.				.10			.38				7.39
Woodstock	Shenandoah							.59	.27	.05										.05	.20		.77			.04		.01	.03	T.			2.01

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 1, North Atlantic States.*

Date.	Maine.												Concord, N. H.		Massachusetts.								Providence, R. I.		Connecticut.			
	Eastport.		Greenville.		Orono.		Portland.		Presque Isle.		Rumford Falls.				Amherst.		Boston.		Middleboro.		Nantucket.				Cream Hill.		Hartford.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	57	52	57	41	64	39	67	51	67	45	60	42	77	46	77	54	78	56	72	46	70	56	74	54	66	52	78	56
2	55	38	51	40	61	47	62	45	50	40	55	46	60	44	63	42	64	52	65	50	64	55	64	48	64	54	65	49
3	50	34	56	31	58	26	55	41	54	20	58	30	64	44	67	42	64	50	64	36	62	52	61	49	67	49	68	47
4	62	46	63	39	69	34	74	52	60	36	72	40	74	45	75	49	76	54	74	41	69	55	73	53	69	46	76	52
5	68	55	76	58	78	58	77	59	74	48	78	59	85	64	84	65	85	66	78	61	71	62	81	66	67	56	80	66
6	65	54	80	61	78	61	74	62	77	60	81	61	82	63	82	64	85	67	79	65	73	62	80	66	79	60	80	66
7	63	44	70	41	74	48	64	43	75	45	68	40	72	41	72	46	74	48	73	52	68	55	72	48	64	53	72	50
8	53	40	58	32	63	28	54	40	60	26	56	33	57	32	59	37	53	44	55	39	56	53	55	43	62	37	56	42
9	49	46	49	37	63	33	51	43	52	31	52	37	53	33	62	37	60	43	58	44	58	51	60	41	60	42	61	43
10	57	46	54	42	66	44	57	46	51	42	54	47	55	44	61	42	63	49	59	39	59	50	59	46	66	40	59	47
11	63	46	57	45	64	39	71	43	50	37	67	50	70	45	71	40	72	48	74	38	65	51	73	46	72	39	74	43
12	48	40	51	33	62	39	56	38	50	33	50	39	59	39	61	34	62	42	67	47	61	45	61	38	61	43	60	40
13	47	36	44	30	51	31	52	35	50	30	50	35	55	24	59	29	54	38	64	21	52	43	55	33	65	28	57	34
14	50	40	41	32	51	30	53	41	44	27	50	38	63	38	74	39	73	45	71	29	65	46	72	42	71	37	74	43
15	47	38	40	24	53	22	50	41	53	22	45	22	50	45	57	39	56	51	66	50	59	53	57	52	61	44	61	51
16	60	47	52	38	63	40	56	49	54	40	61	46	68	45	73	45	73	54	73	49	67	56	73	52	66	43	74	53
17	57	41	52	40	62	40	67	45	49	36	60	40	68	39	72	35	71	50	69	34	63	53	70	46	72	46	71	46
18	52	37	46	30	60	28	55	41	52	26	55	36	68	33	74	36	71	52	68	33	63	49	64	44	71	50	74	42
19	59	49	78	38	77	43	77	48	62	42	76	35	81	36	78	46	79	56	74	45	70	56	74	55	74	56	74	54
20	66	46	70	51	75	53	64	48	70	43	70	44	67	52	74	58	65	55	66	47	63	59	64	58	69	40	66	57
21	48	37	47	28	67	30	50	35	48	25	54	31	56	52	61	33	55	43	62	43	53	48	62	43	60	44	60	44
22	48	41	42	25	50	22	49	38	52	24	46	27	47	30	48	33	55	45	55	44	55	50	54	44	49	37	50	42
23	48	45	45	28	48	43	52	41	48	40	50	40	52	41	54	44	58	44	57	48	59	48	55	42	52	40	55	45
24	51	38	42	33	52	35	57	37	52	34	50	33	57	36	60	34	61	42	60	34	57	46	60	39	54	32	58	42
25	53	39	44	29	56	27	51	39	46	34	47	34	56	34	59	38	65	46	65	33	51	50	64	45	58	40	63	45
26	51	36	43	33	53	41	48	36	50	34	43	38	48	36	54	34	54	41	58	44	56	48	53	41	50	33	54	42
27	56	34	36	29	44	21	49	34	43	28	37	32	48	33	65	34	72	40	67	35	64	43	68	40	55	40	69	42
28	56	43	43	32	47	34	52	39	44	35	46	36	50	30	54	36	55	43	62	43	61	49	54	40	47	37	54	40
29	44	37	36	32	47	28	48	24	41	27	44	30	47	24	50	24	52	37	52	22	49	42	50	34	40	27	48	30
30	43	35	35	27	49	32	44	33	49	30	40	26	44	24	46	22	48	33	48	25	47	38	46	30	43	21	44	30
31	46	31	35	17	48	21	48	29	52	18	29	21	50	19	54	19	57	34	54	17	52	26	55	27	54	26	56	26
Mns	53.9	41.6	51.4	35.7	59.6	36.4	57.9	42.1	54.2	34.1	55.3	38.0	60.7	38.7	64.5	40.0	64.7	47.4	64.8	40.5	61.2	50.3	63.2	45.3	61.5	41.7	64.2	45.5

Date.	New Haven, Conn.		New York.												Pennsylvania.												Asbury Park, N. J.	
			Addison.		Albany.		Binghamton.		Cooperstown.		Indian Lake.		New York.		Everett.		Harrisburg.		Philadelphia.		Scranton.		State College.		Wellsboro.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	79	59	74	52	81	55	72	54	71	41	.....	.....	82	61	81	50	84	58	82	63	80	58	76	50	78	51	83	31
2	65	49	66	43	61	47	54	41	60	40	65	35	67	53	77	38	67	50	70	57	60	54	67	44	65	45	80	52
3	65	48	73	37	67	46	65	40	63	35	64	39	69	55	72	40	73	45	73	52	70	42	69	39	71	34	67	56
4	76	61	78	37	75	56	73	69	73	53	75	45	76	64	79	49	78	61	78	61	76	69	76	58	79	55	71	64
5	80	67	76	66	81	66	76	67	75	65	70	55	82	67	86	57	84	67	82	68	81	66	80	35	77	64	80	66
6	78	67	88	63	83	68	82	54	80	44	79	61	83	68	87	60	85	68	84	68	84	58	83	66	85	67	81	67
7	70	51	63	47	68	44	54	41	69	33	77	29	73	53	78	51	75	49	74	55	58	45	70	44	72	47	74	55
8	60	45	61	34	59	36	52	76	57	32	59	23	59	51	53	40	53	46	58	52	59	40	51	35	56	32	58	54
9	62	45	63	46	61	45	60	50	55	41	57	38	64	50	66	46	68	50	70	53	64	48	62	46	60	33	68	58
10	60	46	64	44	56	44	50	38	49	38	47	35	62	49	63	48	63	50	63	52	53	42	60	43	61	38	65	48
11	75	45	77	34	70	41	72	34	65	40	60	30	75	49	73	38	77	48	77	52	75	38	72	46	78	73	78	46
12	64	41	64	37	61	38	53	38	56	25	58	34	67	46	74	48	70	43	73	47	60	37	63	47	63	40	73	56
13	56	35	65	25	51	31	50	31	49	36	50	18	55	41	60	35	60	37	60	42	63	30	57	28	61	22	59	38
14	74	46	83	43	69	45	71	46	67	38	55	35	74	48	80	34	78	47	76	51	74	48	76	43	80	36	78	47
15	62	54	71	50	57	48	69	47	60	47	50	40	66	59	77	40	76	55	71	58	76	56	75	57	73	48	74	60
16	77	56	75	47	70	53	64	43	62	33	58	39	77	57	78	41	78	57	82	56	73	47	71	55	75	46	80	56
17	70	49	80	35	71	41	66	34	62	34	65	26	68	54	77	37	74	48	72	57	72	40	74	40	76	30	76	49
18	70	45	84	34	73	39	70	35	71	41	74	27	72	56	74	38	76	46	76	56	77	42	75	40	80	31	67	48
19	72	53	81	37	76	48	71	43	70	45	75	35	73	56	70	45	71	53	77	55	74	44	70	40	76	36	69	49
20	67	41	80	53	72	46	74	53	65	41	78	45	69	63	77	61	77	62	68	64	75	58	79	58	79	55	65	62
21	62	43	64	45	56	42	61	46	55	42	65	33	63	49	70	52	64	55	65	53	65	49	69	52	70	44	64	55
22	55	43	63	48	49	39	49	45	47	40	55	29	57	48	65	47	62	49	57	52	55	46	58	44	62	46	60	54
23	56	45	55	40	50	42	45	37	46	35	45	35	55	45	54	29	56	45	59	45	51	43	52	40	53	40	60	36
24	58	41	64	29	58	37	50	37	52	31	53	30	56	44	64	33	60	41	60	46	58	42	59	33	61	28	57	38
25	64	48	57	44	60	44	54	39	50	31	50	40	63	47	60	34	57	47	62	50	61	42	57	42	55	43	64	47
26	55	41	60	29	52	37	46	32	44	32	48	27	58	43	62	35	59	44	60	45	54	38	55	35	55	27	58	42
27	69	41	66	44	68	40	57	42	49	34	48	26	71	50	66	34	64	44	71	49	68	45	64	42	61	37	75	45
28	56	39	59	39	53	39	42	35	44	29	43	30	52	40	48	30	48	41	54	43	46	37	43	34	49	21	68	45
29	49	34	43	23	47	34	35	30	36	24	40	28	49	36	39	30	43	34	50	38	41	31	39	30	42	22	52	32
30	45	30	49	22	42	30	43	23	36	28	36	16	45	32	48	23	47	31	49	35	45	26	44	27	46	20	47	29
31	56	28	63	24	52	30	55	32	48	25	46	25	55	39	60	40	59	31	60	37	57	28	57	32	62	22	58	33
Mns	64.7	47.0	67.8	40.1	62.9	43.6	59.2	41.4	57.6	37.8	58.2[a]	33.9[a]	65.7	50.7	68.3	41.4	67.3	48.5	68.2	52.0	64.7	44.2	64.6	43.7	66.5	38.8	68.0	49.9

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 1*—Continued.

Date.	New Jersey.								Martinsburg, W. Va.‡‡		Maryland.								Millsboro, Del.		Washington, D. C.		Virginia.					
	Atlantic City.		Hightstown.		Newton.		Phillipsburg.				Baltimore.		Darlington.		Frederick.		Westernport.						Culpeper.		Fredericksburg.		Staunton.‡‡	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	76	65	83	57	.....	.....	82	59	87	50	90	62	88	58	88	61	84	52	84	54	90	61	86	59	90	60	85	59
2...	68	56	77	50	.....	.....	67	47	72	53	72	58	77	48	80	56	75	48	73	55	73	52	77	56	76	61	78	52
3...	70	51	75	38	.....	.....	75	40	79	43	73	50	73	42	76	41	78	46	75	42	77	47	71	42	75	45	72	44
4...	74	67	81	56	.....	.....	80	55	82	43	79	63	78	59	82	58	84	51	83	52	81	63	79	57	84	54	81	54
5...	76	69	86	64	.....	.....	84	65	86	51	84	67	81	55	87	65	89	58	86	62	86	68	83	65	88	63	81	62
6...	76	70	87	63	.....	.....	86	66	88	60	84	68	82	67	86	51	89	57	88	67	85	68	83	65	88	65	83	63
7...	72	54	79	53	.....	.....	73	49	59	54	75	55	77	54	80	56	81	53	79	62	76	53	80	54	81	55	58	54
8...	61	53	59	47	.....	.....	60	44	52	48	55	52	54	48	67	49	58	45	70	54	54	51	56	48	57	49	53	47
9...	70	54	69	51	.....	.....	67	49	72	48	73	54	70	49	72	48	72	46	74	56	74	53	73	48	76	61	78	45
10...	64	47	65	43	.....	.....	62	46	67	48	66	51	63	47	64	49	70	47	68	49	65	46	67	45	69	46	67	39
11...	76	50	80	41	.....	.....	78	45	80	40	78	51	78	44	76	46	81	38	79	45	80	46	78	39	82	41	80	40
12...	76	47	73	48	.....	.....	67	41	81	41	81	51	76	49	78	58	81	51	81	52	81	49	80	44	86	47	83	48
13...	58	40	63	29	.....	.....	61	33	62	41	69	41	62	76	61	42	65	44	61	46	64	44	68	40	66	43	66	48
14...	72	58	79	38	.....	.....	75	44	81	41	80	55	78	47	77	48	82	36	81	45	80	52	76	47	80	51	79	48
15...	69	59	69	54	.....	.....	68	54	83	45	77	63	76	55	81	59	82	53	83	54	84	58	81	51	85	55	82	50
16...	83	59	83	55	.....	.....	79	52	83	54	85	59	81	52	82	60	85	55	83	59	85	56	83	51	88	53	86	53
17...	68	52	73	40	.....	.....	75	41	75	49	72	55	74	46	74	48	78	48	78	48	77	49	73	53	75	54	77	54
18...	69	51	79	40	.....	.....	78	39	75	42	72	49	75	41	74	41	79	40	71	42	75	44	70	42	74	42	75	46
19...	71	60	79	45	.....	.....	76	44	71	44	76	56	76	42	70	50	78	40	77	51	76	54	65	52	72	44	65	50
20...	70	62	68	61	.....	.....	71	58	78	54	72	65	69	64	76	63	83	59	74	61	75	61	75	64	79	66	80	57
21...	63	56	65	51	.....	.....	61	51	58	56	66	58	67	56	70	55	70	47	65	57	67	58	71	54	73	57	77	52
22...	64	47	58	43	.....	.....	53	46	61	46	65	51	62	52	62	52	68	47	65	50	63	51	65	48	66	56	64	54
23...	60	45	57	38	.....	.....	57	41	59	44	61	45	60	40	60	41	60	42	63	41	61	42	61	39	65	37	63	36
24...	60	40	60	34	.....	.....	58	28	63	34	63	44	60	35	61	36	65	31	64	36	63	27	61	34	67	35	64	36
25...	64	47	35	39	.....	.....	61	40	63	35	67	47	64	41	61	43	60	42	69	42	66	42	64	38	70	39	65	41
26...	60	41	60	40	.....	.....	60	40	64	41	63	44	59	40	62	40	65	32	63	41	64	45	61	36	66	37	65	36
27...	66	51	74	38	.....	.....	69	39	68	40	70	49	70	45	63	41	69	35	73	46	66	48	61	42	68	49	65	48
28...	55	37	72	44	.....	.....	51	25	49	40	52	78	62	42	52	39	48	35	64	35	54	38	58	40	65	42	48	36
29...	49	34	51	28	.....	.....	48	29	45	31	46	36	45	31	46	32	39	31	48	31	46	34	45	31	48	32	44	26
30...	46	30	49	26	.....	.....	48	27	50	27	49	32	48	26	47	30	51	18	50	29	49	31	46	28	52	25	50	24
31...	57	41	59	25	.....	.....	58	25	64	27	63	35	60	30	60	28	65	26	34	27	65	32	59	26	67	27	65	23
Mns	66.5	51.4	70.2	44.4	.....	.....	67.4	44.6	69.6	44.2	70.0	51.7	69.2	46.8	70.2	48.2	72.1	42.5	72.1	48.1	71.0	49.5	69.5	46.4	73.5	48.1	70.3	46.3

Climatological Data for October, 1910.

DISTRICT No. 2, SOUTH ATLANTIC AND EAST GULF STATES.

CHARLES F. VON HERRMANN, District Editor.

GENERAL SUMMARY.

The month of October presented several meteorological features of unusual interest. While the month as a whole was quite warm, the mean temperature for the entire district averaging over 2.5° above the normal, a period of much colder weather prevailed toward the close of the month that gave the lowest temperatures ever experienced in October at many places from North Carolina south to northern Georgia and Alabama. However, the heavy to killing frosts on the 28th to 31st occurred close to the average dates for the first killing frost at most places in the several States embraced in the district. The advent of this cold wave was signalized by snow flurries which established new records for the earliest occurrence of snow in Virginia, North Carolina, Georgia, and Alabama. Generally only traces were received, but at Rock House, N. C., 0.5 inch, unmelted, fell, and Mentone, Ala., reported 0.2 inch, unmelted, on the 28th, the the earliest measurable snowfall in the history of the State. The rainfall for the district was generally above normal, the excess averaging but 0.78 inch for all the States except Florida, where the average was 4.85 inches above normal.

Another important phenomenon was the tropical storm that swept over Florida and the south Atlantic coast from October 17 to 20. This disturbance was more destructive than the similar storm of last year, because it covered a much greater territory. It moved directly northward over the central portion of the Peninsula of Florida, thence along the coasts of Georgia and South Carolina, decreasing in force as it moved northward so that it caused only moderate gales in eastern North Carolina and Virginia. In Florida and southeastern Georgia much damage was wrought by the heavy rains and dangerous gales, the loss approximating over half a million dollars. In Florida about 30 lives were lost, mostly in sparsely settled districts, elsewhere there was no loss of life owing to the perfect distribution of the forewarnings of the approach of the storm by the Weather Bureau. A large number of vessels remained in harbor in safety; a few that ventured to continue their voyage were lost or greatly damaged. A complete description of the storm is given at the end of this summary.

The district came under the influence of about 6 areas of low and 8 areas of high atmospheric pressure during the month. The general rains of the 6th to 9th accompanied a disturbance that moved from Oklahoma on the 5th to the mouth of the Mississippi on the 6th, after which it lingered in the Gulf of Mexico until the 8th, during which time the pressure was high on the north Atlantic coast. The rains of the 27th to 28th were partly due to a storm over the lower Lakes and partly to the rapid change of temperature brought about by the cold wave advancing from the northwest. This cold wave appeared in the extreme Northwest on the morning of the 27th, with a pressure of over 30.70 inches, and spread rapidly over the eastern and southern portions of the country. On the morning of the 30th when the lowest temperatures for the month were experienced the atmospheric pressure was above 30.50 inches at all stations in the district, the highest being 30.60 inches at Anniston, Ala. Interest in the pressure distribution this month, however, centers chiefly in the progress of the tropical disturbance of the 17th to 20th. The lowest pressure observed during the storm at land stations was 28.40 inches at Sand Key at 1:50 p. m., October 17. This is but 0.04 inch higher than occurred during the tropical storm of October, 1909. On the 18th the lowest pressures registered were: Tampa, 28.94 inches; Jupiter, 29.21; and Jacksonville, 29.13 (29.09 at 12:30 a. m. on the 19th). The pressure did not fall so low at northern points, Savannah reporting 29.35 and Charleston 29.40 on the 19th. On the 20th the pressure registered 29.51 inches at Wilmington and 29.43 at Hatteras. The range in atmospheric pressure for the district was unusually large, namely, 2.13 inches.

As a rule the month was pleasant, with a high average number of clear days, and conditions were favorable for outdoor occupations in most of the district. The dry earth rapidly absorbed the rainfall which, however, was generally insufficient to restore the normal water contents of the soil in nearly all sections, except Florida.

TEMPERATURE.

As compared with normal conditions October was a very warm month, the mild weather continuing practically uninterrupted from the first to nearly the close of the month, when a pronounced cold spell prevailed, during which unusually low temperatures were registered and killing frosts were general except near the Gulf coast. Positive temperature departures occurred at all stations except over the southern half of Florida, where there were small deficiencies, not exceeding 2° at any point. From northern Florida where the departure was +2° the excess in monthly mean temperature gradually increased toward the north to over +4° in the northern portion of the Gulf States and the western portions of South Carolina, North Carolina, and Virginia. At nearly all the regular Weather Bureau stations, except those in Florida, the departure was close to +3°. The average temperature for the entire district was 66.5°, or 2.7° above the normal. The greatest average excess in temperature occurred in North Carolina and South Carolina (+3.5°) and the least in Florida (+0.6°). The mean for Georgia for October, 1910, has been exceeded but once during the past 20 years, and in Alabama and Mississippi the month was the warmest October since 1900.

The warm and agreeable conditions that continued almost undisturbed until the 24th might well be described as a veritable Indian Summer. There were two marked periods of warm weather during which the highest temperatures ranged from 85° to over 95° in various portions of the district. The first of these prevailed from the 1st to 6th, with the highest temperature in all States on the 1st or 2d (in the Virginia area on the 6th), and the second from the 16th to 21st, but with more moderate temperatures. The highest temperature in Virginia was 89° on the 6th at several places, but in all other States the highest temperatures ranged between 95° and 100°.

A moderate fall in temperature took place on the 23d and 24th, with the earliest formation of light frost for the season in the northern portion of the Gulf States and in the mountainous region in other sections. The cool weather continued and a more marked fall in temperature, preceded by light snow flurries, occurred on the 28th, and a pronounced cold spell prevailed during the closing days of the month, with freezing temperatures or killing frosts throughout the district on the 29th, 30th, and 31st, except near the Gulf and south Atlantic coasts. Thin ice was observed even as far south as Biloxi, Miss., a rare occurrence for October. The temperatures experienced during this period of cold weather ranged from 18° at Hot Springs, Va., and 19° at Lenoir, N. C., to 27° at Molino, Fla. In some States all records for low temperatures in October were broken on the 29th or 30th. For example, in North Carolina the temperatures on October 30, 1910, were 1° lower than any previous record for the month at Raleigh, Charlotte, and Wilmington, and generally over the State. At Atlanta the lowest temperature in October since 1879 is 30° on the 30th in 1887; the same temperature occurred 1 day earlier this month. At Montgomery, Ala., the lowest, 31°, has been equaled only once before since 1872, namely, on October 30, 1873. The killing frosts that were

general on the 29th and 30th, extending even to Southport and Wilmington on the Atlantic coast and well into northern Florida, killed much vegetation, but the loss to crops is thought to have been small as they had mostly matured.

The state means ranged from 61.3° for the Virginia area to 73.1° for Florida. The mean temperatures at individual stations showed comparatively small ranges for the district. The monthly means were below 60° at only four stations in Virginia, and outside of Florida they were above 70° at only one place in South Carolina, at two in Georgia, six in Alabama, and three in Mississippi. On the other hand, in Florida the monthly means were above 70° at all stations except one. The highest monthly means ranged from 65.8° at Newport News, Va., to 77.8° at Key West, Fla., and the lowest from 54.8° at Hot Springs, Va., to 69.2 at Molino, Fla. The highest actual temperature for the district was 100° on the 2d at Santuc, S. C., and the lowest was 18° at Hot Springs, Va., on the 30th.

PRECIPITATION.

The features of special importance in regard to the distribution of precipitation are the very large amounts received at some stations in Florida, which lead to interesting comparisons with previous records, and the occurrence of snow flurries on October 28 in Virginia, North Carolina, northern Georgia, and Alabama, the first snow so early in the year since 1898, while the measurable amount at Mentone, Ala., is unique in the climatic annals of the State. The average precipitation for the entire district determined from the records of 340 stations was 4.43 inches, or 1.36 inch above the normal. The excess in rainfall was moderate in all the States except Florida, where the State average, 8.74 inches, shows a positive departure of 4.85 inches. In Florida three stations received over 20 inches and 24 over 10 inches of rain. In other portions of the district the monthly precipitation ranged mostly between 2 and 6 inches, only 35 stations reporting less than 2 inches and 33 more than 6 but under 10 inches.

Outside of Florida the regions of heavy precipitation covered very limited areas in southwestern Alabama, along the southern coasts of Georgia and South Carolina, and in the upper tidewater section of Virginia. In Florida excessive rains occurred over the eastern and southern portions of the State. The marked excess here was due to the passage of the tropical storm northward over the central portion of the peninsula, under the influence of which very heavy and damaging downpours occurred. Rains exceeding 2.50 inches in 24 hours were reported at 33 stations in Florida. At Hypoluxo, Palm Beach County, 16.79 inches of rain fell on the 15th and 16th, and the rainfall for the month reached the very large total of 27.81 inches, the greatest ever recorded at that place. Jupiter received 8.64 inches in 24 hours on the 15–16th, and the total for the month was 20.88 inches. At Miami the total was 21.45 inches. It is interesting to note that a rainfall of 20 inches or more in one month is not altogether a rare occurrence in Florida, as the following comparative record shows:

Station.	Amount.	Month.	Station.	Amount.	Month.
	Inches			*Inches.*	
Hypoluxo	23.25	June, 1892.	Miami	27.86	October, 1908.
Do	24.39	August, 1895.	Do	21.08	October, 1909.
Do	21.28	June, 1901.	Do	21.45	October, 1910.
Do	27.81	October, 1910.	Tampa	24.52	July, 1840.
Jupiter	21.03	October 1895.	Do	23.40	August, 1840.
Do	21.39	October, 1904.	Do	22.24	July, 1856.
Do	20.43	October, 1908	Merritts Island	23.78	September, 1878.
Do	20.88	October, 1910.	St. Lucie	29.35	June, 1853.
Miami	25.10	September, 1878.	Brooksville	20.54	July, 1906.
Do	20.35	September, 1897.			

In several portions of the district the rainfall was under 2 inches, namely, in south-central Alabama, with a minimum record of 0.30 inch at Evergreen, Conecuh County; in central-western Georgia; in western South Carolina, minimum record 1.40 inch at Clemson College; and in southeastern North Carolina, minimum record 1.17 inch at Sloan. In Virginia the precipitation in the mountains was very light and some observers reported a great scarcity of water and that springs were drying up. In the northern and west-central regions of Georgia drought prevailed from the 10th to the 27th, inclusive.

Rains generally occurred in fairly distinct periods from about the 7th to 9th in the northern portion of the district and 4th to 9th in the southern portion, also about the 19th to 21st and 27th to 28th, except that in Florida rains fell almost every day from the 1st to 19th and on scattered dates during the remainder of the month. Snow was reported on the 28th at 3 places in Virginia, at 13 stations in North Carolina, at 8 in northern Georgia, and at 3 in Alabama. The number of days with rain averaged about six in all sections except Florida, where the number was 11. A few thunderstorms were reported.

RIVER CONDITIONS.

As a rule the rivers in Alabama and Georgia maintained relatively low stages during the month, as the heaviest rains fell in the lower portions of the river basins; elsewhere nearly normal stages prevailed. In South Carolina heavy rains on the 7–9th caused a considerable rise in the Wateree with flood stages at Camden, S. C., on the 10th, and later the Santee River experienced a rise to flood stages at Ferguson and Rimini, but with no material damages.

MISCELLANEOUS PHENOMENA.

The prevailing winds for October were from the northeast in all the States from North Carolina to Florida and from the north in Alabama and Mississippi. The average wind movement was decidedly higher than for several months past, and in consequence of the passage of the tropical storm unusually high maximum wind velocities were reported at all the coast stations. At Sand Key the estimated maximum velocity was 125 miles from the south on the 17th; at Key West an estimated velocity of 100 miles, also from the south, occurred on the same date; Jupiter reported 70 miles from the south on the 18th, Jacksonville 56 miles from the northeast and Tampa 48 miles from the north on the same date; Savannah reported 70 miles from the northeast on the 19th, Hatteras 48 miles from the north on the 20th, and Cape Henry, Va., 46 miles from the north on the same day. The number of clear days averaged 18 for the district, the number of cloudy days but 7, this indicating the predominance of periods of fine weather in most portions of the district.

THE TROPICAL HURRICANES OF OCTOBER, 1910.

There is some evidence that two tropical disturbances, one closely following the other, passed over the western end of the Island of Cuba during the second decade of October, 1910, both of which caused much damage in Cuba. These storms took quite distinct courses, the first after passing over Havana and slightly west of Key West, Fla., lingered northwest of the Florida keys for two days and then appeared to dissipate in the central part of the Gulf of Mexico; while the second storm moved northward over central Florida and passed eastward into the Atlantic Ocean off the coast of South Carolina.

The first hurricane was observed southwest of Cuba near the Yucatan Channel on the morning of October 13, and advisory warnings were issued at 9:30 a. m. to Gulf and south Atlantic ports. From that time until the final disappearance of the second hurricane in the Atlantic shipping interests and all parts of the country likely to feel the effects of the disturbances were kept fully informed of the position, probable course and force of the storms, resulting unquestionably in the saving of an immense amount of property and in greatly diminishing the loss of life.

On the evening of October 13 the first tropical storm was central south of the western end of Cuba; it reached Havana at about 1 o'clock on the 14th accompanied by a deluge of rain that

flooded the streets. Considerable damage to crops and other property resulted from the heavy rains and high winds in western Cuba. The storm then advanced northward to the Florida keys. The first detailed account of the progress of the disturbance is given by Mr. F. D. Young, in charge of the local office of the Weather Bureau at Sand Key, Fla., who reported as follows:

The barometer began to fall about midnight of the 12th, and fell slowly but steadily to 29.55 inches at 5 p. m. on the 14th. Much rain fell on the night of the 13th, and the wind velocity steadily increased. At 3.30 p. m. the waves began to wash over the island, carrying the sand from under the light-house and shifting it to a position farther north. The barometer remained at about 29.60 inches till 8 p. m. on the 16th. On the morning of the 16th the waves began to subside and several steamers passed.

High southeast winds and heavy rains also occurred at Key West on the 14th, but at that point also the barometer began to rise on the 16th. Reports from vessels at sea by wireless, as well as the logs of ships entering the harbor of Tampa after passing through the storm, indicate that the first hurricane moved northwestward into the central portion of the Gulf of Mexico west of the Dry Tortugas. At 8 a. m. of the 14th the Ward Line steamship *Vigilancia* was reported about 180 miles west of Sand Key with the barometer 29.40 inches, and at the same hour the Mallory Line steamship *Brazos* was 164 miles west of the Tortugas and reported a strong gale with high seas from the east-northeast, pressure 29.82 inches. The disturbance apparently maintaining its great intensity and wide extent was almost stationary in the east Gulf during the 15th and 16th, and was then dissipated in the central Gulf. The following report is of special interest:

Report of Captain Sullivan, American steamship *Jean*. A new steel ship, 3,125 gross tons; length, 311 feet; beam, 41.6 feet; depth, 21.8 feet. Time, 90th meridian:

After running into a fierce gale in which she lay to for 24 hours off Jupiter, the ship made for Florida Strait, expecting that the hurricane had passed. Sand Key was passed at 11.55 p. m. on the 16th, and signals exchanged. Ship headed east-southeast. It was then blowing a strong gale from an easterly direction, sky cloudy and threatening. At the beginning of the hurricane the position was made from well-known landmarks, latitude, 24° 26′ N., longitude, 82° 41′ W. Ship hove to. The storm lasted from 5 a. m. to 8 p. m., during which time the ship drifted against unusually strong stream from Gulf 60 miles in a direction west-southwest by west ½ west. During this time it was impossible to see the sea for the rain and spray. Immense seas came over the ship, even wetting down the chart house on the bridge deck, so that water had to be constantly baled out. Boats were stove in, and much of the fittings loosened, and the port bow plate was dented as if the ship had run into some heavy fixed obstruction. At 11:25 a. m. the ship arrived at the center of the storm. Overhead the sky was perfectly clear, but the horizon was dirty, wind almost calm, and sea fearfully choppy. At 1 p. m. the wind came fiercely from the west-northwest of hurricane force lasting till 7:30 p. m., when it began to moderate. The wind blew hardest when the barometer was between 28.10 and 28.30, both going up and down. The barometer at the time of reaching the center at 11:25 a. m. was below the scale, but was carefully marked with the set hand and subsequently with a file. This was estimated by means of a paper protractor by Mr. Wurtz as 27.72 inches, which with present correction would be 27.80 inches. The barometer rose slightly on entering the center. Ship's position at that time approximately 27 miles south of Tortugas.

On the 16th of October heavy rains again began to fall in Havana accompanied by dangerous gales, and a new hurricane of great intensity was observed central slightly west of Havana on the morning of October 17. The full force of this storm was felt at Havana during the 17th. Hurricane warnings were continued at southern ports of the United States and special efforts were made to disseminate warnings of the approach of a dangerous storm to all points in Florida and on the south Atlantic coast. The progress of the storm is revealed by the reports of the Weather Bureau officials at Sand Key, Key West, Jupiter, Tampa, and Jacksonville, Fla., Savannah, Ga., and Charleston, S. C.:

Sand Key, Fla.—The barometer began to fall rapidly about midnight of the 16th, and reached 28.62 inches at 12:20 p. m. on the 17th. At noon the wharf and wood pile were washed away and the light-house shook and swayed in the wind. Great trouble was experienced in keeping the doors closed. The force of the wind drew large nails from the doors. The sand was all washed from sight by this time, and monster waves broke over the whole island, reaching nearly up to the water tanks. Spray from the waves mingled with the rain and made it impossible to see more than 200 feet.

The wind blew from the southeast up to 1:05 p. m., when it changed to south. The velocity increased and the swaying of the building stopped the clock several times. The gusts sometimes lasted several minutes and their estimated velocity was 125 miles an hour. At 1:30 p. m. the dingey broke away and was lost, and the boathouse went to pieces and was washed into the sea. At 1:50 p. m. the barometer reached its lowest point 28.40 inches. Telephonic communication with Key West was broken at 2 p. m. The wind shifted to southwest at 6 p. m.

At about 3:30 p. m. the barometer began to rise slowly, but the wind continued with unabated fury till about 6 p. m., when it began to subside. At 4 a. m. on the 18th the wind was still strong enough to shake the light-house, but the size of the waves had very much diminished. Telephone communication with Key West was resumed at about 7 p. m. After the storm was over the island was completely covered with water about 2 feet deep at its shallowest point, and about 5 feet deep under the light-house.

Some conception of the force of the wind may be gained from the following. The windows and doors were all kept closed, but two panes of glass were blown out on the windward side. The air that was forced in through these holes increased the pressure at the opposite side of the house about 0.05 inch. When the door was opened to let the air go through the barometer fell about 0.05 inch and when the door was closed it immediately rose again.—*F. D. Young, Assistant Observer.*

FIG. 1.—Path of the storm.

Key West, Fla.—The atmospheric pressure rose slightly on the 16th to 29.60 inches. After 10 p. m. it began to fall rapidly and reached its lowest reading, 28.47 inches, at 3.20 p. m. on the 17th. A gradual rise in pressure followed to 29.29 inches at midnight of the 17th, and to 29.75 inches at midnight of the 18th.

Brisk to high northeast winds varying in velocity from 30 to 50 miles with gusts of 60 miles an hour prevailed from midnight to 8 a. m. on the 17th, shifting to southeast after 8 a. m., and increasing in velocity to from 48 to 80 miles an hour. At 12:25 p. m. the wires to the anemometer cups were torn away by the wind at the moment when the velocity was 72 miles an hour. From 3 to 4 p. m. the wind was from the south, after which it shifted to southwest and continued steady in that direction during the remainder of the 17th and 18th. The wind reached its greatest force between 2:30 and 4:30 p. m. of the 17th, when it was estimated that the highest velocity was over 90 miles an hour, and that gusts of 110 miles an hour were frequent. The wind lessened slightly after 5 p. m. (17th), but continued during the night until 3 a. m. of the 18th with a velocity of over 60 miles an hour, after which it gradually diminished. The storm lasted 30 hours.

The tide and sea swell were unusually high. At 7 a. m. of the 17th the waves were dashing over the southern and western sections of the island

and by 9 a. m. the Weather Bureau grounds in the southwestern section of the city were entirely submerged. The tide, wind, and swell steadily increased during the morning and afternoon, and at 3 p. m. the basement of the building was covered with water to a depth of 7 feet. The new United States army dock and the marine hospital dock were swept away and the débris pounded against the office building with terriffic force. The waves at times were over 15 feet high and dashed against the office windows. The rainfall during the storm was moderately heavy, the estimated amount being 3.89 inches up to 8 p. m. on the 17th. At 1:50 p. m. the rain gage was carried out to sea. The damage in the city and along the keys was considerably less than during the storm of the preceding year, and a conservative estimate places the amount below $250,000. The destruction was mostly limited to marine property and to houses along the beach. The French line steamship *Louisiane* went ashore at Sombrero Light, but 600 passengers were safely removed by the revenue cutter *Forward*. A number of small schooners were wrecked.—*C. J. Doherty, Observer.*

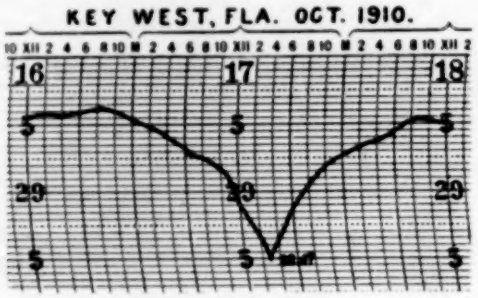


FIG. 2.—Barograph trace at Key West, Fla., October 17, 1910.

The hurricane entered Florida south of Cape Romano and thence pursued a northerly course over central Florida, but somewhat nearer the west coast and entered southeastern Georgia west of Jacksonville on the morning of the 19th.

Tampa, Fla.—The wind set in quite steady from the northeast on the night of the 12th increasing somewhat during the 13th. On the 14th the wind increased to brisk, shifting to more easterly and the barometer began slowly to fall. Toward night it backed again to northeast, fresh. The clouds became denser with alto-stratus from the east and cirrus from the southwest. Over the northwestern horizon clear sky was visible much of the time, while it became very threatening with clouds of dark gray color in the south. No great amount of rain occurred until the 15th. The pressure slowly decreased, the wind becoming more steadily northeast and continuing brisk, while high winds and sea were reported beyond the bar. On the 16th a more rapid fall in pressure occurred, reaching 29.71 inches at midnight. The rain fell with little interruption until 10:15 a. m. when it ceased. On the 17th the barometer fell at an increasing rate, the wind rose steadily and rain began early in the morning. By 9 a. m. all the clouds were denser and rapidly flying scud crossed the sky. By the night of the 17th the wind was blowing a gale still from the northeast, coming in violent puffs followed by lulls. Wires were beginning to go down and communication with the outside world became more difficult. At midnight the barometer had fallen to 29.30 inches, breaking all previous records, and continued falling until about 7:45 a. m. of the 18th. The wind increased during the early morning hours of the 18th, attaining an extreme velocity of 60 miles an hour at 2:37 a. m., but it is believed that momentary gusts reached a velocity of at least 70 miles an hour, though the maximum recorded for a continuous 5-minute period was 48 miles at 2:18 a. m. The verifying velocity was last attained at 6:57 a. m.

The lowest pressure by corrected barograph was 28.94 inches at 7:45 a. m. By this time the wind had shifted to northwest, and by 11 a. m. it had become west, where it remained until the storm velocity had ended. By 10 p. m. on the 18th the wind was blowing moderate from the southwest. During the 19th the barometer rose steadily, but did not reach normal until the 21st of October.

Locally the damage was comparatively small for so severe a storm, probably the greatest loss being to the citrus interests. The most careful estimate, based on comprehensive reports from 200 localities, has been made by the Citrus Exchange. Their estimate is that about 10 per cent of the whole crop has been destroyed, while in only a few instances have the groves been injured. The least damage lies in the north of Tampa, while the damage increases southward toward the Everglades, which is probably the part of the peninsula traversed by the center of the storm.

Shipping in Tampa Bay and to the northward was damaged but little. The northeast winds carried the water out of the bay, and the lowest water ever known on this coast was generally reported. In the Hillsboro River at Tampa the water fell 9 feet below mean tide, the usual depression being about 1 foot. Forty vessels were counted at daylight on the morning of the 18th aground in the river. Little damage resulted, except in the case of the small bay steamer *Mistletoe*, which rolled over on the bank so far as to fill with water as the tide returned. The estimated damage was about $1,500. The other small craft appear to have suffered no injury, although in some cases the owners were put to some expense to maintain an even keel till the water returned.

A few small boats on the coast and possibly some buildings and other structures were injured or destroyed, but there appears to have been no loss of life in this section.

More destruction attended the storm in the vicinity of Charlotte Harbor and the Caloosahatchee River. Seven men were drowned in the wrecking of four Cuban fishing schooners at Punta Gorda; a negro was drowned in attempting to cross the Peace River near Nocatee, and a one-armed man and a baby were drowned by high tide in the vicinity of Thousand Islands. Dwellings and property were also destroyed in the vicinity of Chokoloske, and aid was required to feed and cloth the sufferers. It is also reported that buildings at Flamingo were destroyed. The center of the storm must have entered Florida near Cape Romano, for while the tide seems to have been blown offshore from Boca Grande northward, the keys and islands south of the cape were swept by great waves from the Gulf that reached a great distance inland. The survivors could only escape by climbing trees.—*George B. Wurtz, Local Forecaster.*

Jupiter, Fla.—The first storm began on the 13th and lasted until the 16th, causing unusually heavy rains but very little wind and not much decrease in pressure. The lowest barometer, as shown by the barograph, was 29.70 inches; the highest wind 37 miles an hour. The wind direction was southeast until 1 p. m. of the 14th, when it backed to northeast as the second storm approached. The warnings issued on the 17th by the Weather Bureau were especially timely and fortunate. People believing the weather to be breaking after the first storm were resuming their usual avocations, boats and other property that had been protected were being brought out for use, and the people might thus have been caught quite unawares. The warnings, however, were distributed as widely as possible, boat parties were turned back, farmers and others were advised to hurry home, work on a big bridge was stopped, and property made safe.

The second storm began with high and increasing east winds, rain, and diminishing pressure. Storm velocity began at 2 p. m. on the 17th, the wind steadily increasing to 56 miles an hour at 6:25 p. m.; then it moderated rapidly to 24 miles and veered to southeast at 8 p. m. From 8:20 p. m. it steadily increased to 58 miles at 10:20 p. m., and from 50 to 58 miles was maintained until midnight, when the wind shifted to south. From 12:20 a. m. to 6 a. m. on the 18th the velocity ranged from 60 to 70 miles until it veered to the southwest at 9 a. m., when the wind gradually diminished in force, falling below a gale at 7:45 p. m.

The rainfall at this point did more damage than the high wind. It had rained every day from the 3d to the 13th, with a total fall of 5.96 inches, and the creeks and flat woods were full of water when the first storm began. From the 14th to the 18th, inclusive, 14.27 inches more fell. The inlet being closed the rivers rose 8 feet above normal high water, which, in a flat country like this, puts practically all land under water from 1 to 8 feet. Fortunately the sea remained low and comparatively smooth, so that it was possible to open the inlet and let the water out. Distant lightning was observed at short intervals in the south and west from 8 p. m. to midnight on the 17th, but no thunder was heard. Vivid lightning, loud crashing thunder, and local whirls that prostrated trees were reported in the Everglades, 50 miles southwest of Jupiter, during the night of the 17–18th. Large numbers of pine trees were blown down by the south wind in the vicinity of Jupiter. The lowest atmospheric pressure was 29.21 inches at 3 a. m. on the 18th.

Along the coast where nine-tenths of the people live only one life was lost, one man having been killed by falling timbers near Lemon City. The property loss was confined to small boats, boathouses, and docks. These losses will total about $3,000 in the section of 210 miles from Titusville to Miami. The railroad bed of the Florida East Coast Railway was seriously washed out in several places and repairs will be very expensive.

At sea the American schooner *Harry T. Hayward*, bound from Baltimore to Knight Keys, Fla., was blown ashore at Bocao Ratone and is said to be a total loss. Three seaman were drowned; the rest of the crew were saved after being in the rigging 12 hours. The vessel and cargo are said to be valued at $110,000.

One unusual feature was the absence of swells and high seas; the ocean remained low and there was no ground swell after the storm. The inlet was opened on the 17th and the sea was so smooth that men worked in it, the water surface being 8 feet lower than the river.—*H. P. Hardin, Observer.*

The passage of the hurricane over the latter part of its course presents fewer matters of interest, as it undoubtedly curved eastward into the Atlantic south of Savannah. Mr. A. J. Mitchell, Section Director at Jacksonville, estimates that the velocity of the storm was about 12 miles an hour, and that the center passed about 30 miles west of Jacksonville. At Lake City, about 40 miles distant, the wind backed to north and northwest, while at Jacksonville it veered from northeast to southwest and west. The usual calm was observed at the center of the storm. At Jacksonville the pressure, which had been declining slowly, began to fall more rapidly after the morn-

ing observation of the 17th, but did not reach its lowest point, 29.09 inches, until 12:30 p. m. on the 19th, at the moment when the wind shifted to southwest. The wind did not attain any great velocity until the 18th, when it increased steadily from the northeast and reached a maximum velocity of 56 miles an hour at 4.05 p. m. From about 10 a. m. to 4:45 p. m. the velocity ranged from 36 to 56 miles an hour, with an extreme velocity for one minute of 65 miles. The wind shifted to southwest and soon to west about midnight of the 18th, the velocity continuing from 36 to 38 miles an hour for the succeeding 10 hours. Rain was continuous on the 18th and the high winds forced moisture into almost every building in the city. The total rainfall during the storm was 5.94 inches, the bulk of which fell from 9:50 a. m. 6 p. m. on the 18th.

As a result of the continuous northeast winds the tide was unusually high, and low places in the city were submerged. Though much apprehension was felt for the safety of the 1,500 or more workmen employed on the extension work of the Florida East Coast Railway between Miami and Key West, no life was lost. Very little damage occurred at Jacksonville. Estimates of the damage to citrus fruits and to truck crops in central and northern Florida vary so widely that a trustworthy statement of the true extent of the loss can not be made, though it must have been considerable.

The interruption of telegraphic communication with cities near the coast led to exaggerated newspaper reports of the damage done in the coast cities of Georgia and South Carolina. At Brunswick, Ga., the docks were under water and the flooded area extended to the railway depot, interrupting traffic for a short time.

The hurricane warning was received at Savannah at 10:20 p. m. of the 17th and was disseminated as quickly and as widely as possible by telegraph and telephone, and at 10:50 p. m. the first hurricane rockets were sent up. Rockets were also sent up at the Yacht Club and at Tybee Island. A special train removed the inhabitants of Tybee Island to Savannah. After 12 noon on the 18th, when the pressure was 29.71 inches, the barometer began to fall more rapidly, reaching 29.52 inches at midnight. During the morning of the 18th the wind steadily increased from the northeast, the weather became more threatening, and at 8:25 a. m. light rain began. In the afternoon the weather was threatening and ominus, with wind of increasing force and gusty in character, and frequent rain squalls. The wind attained a velocity of 50 miles an hour at 1:30 p. m., 60 miles at 11:15 p. m., and at 1:30 a. m. on the 19th reached its highest velocity, 70 miles an hour from the northeast. The wind now diminishing changed its direction from northeast to east at 2:55 a. m. (19th) and to southeast at 5 a. m., and by 9 a. m. had fallen below the verifying velocity of 36 miles an hour. The lowest atmospheric pressure was 29.30 inches at 2 p. m., and by 4 p. m. the wind had backed to northwest and the sky showed signs of clearing.

Mr. H. B. Boyer, Local Forecaster, states that the damage done by the storm at Savannah and its environs was of a minor character. No lives were lost and shipping interests enjoyed complete immunity.

Charleston, S. C.—The atmospheric pressure fell slowly on the 18th, reaching a minimum of 29.65 inches; the lowest atmospheric pressure attained during the storm was 29.39 inches at 6:30 p. m. on the 19th. Beginning at 7 p. m. on the 17th the wind gradually increased in velocity until 1 p. m. on the 18th, when a gale of 52 miles an hour was attained. The wind fell off on the afternoon of the 18th, becoming as light as 22 miles an hour from 6:45 to 7:05 p. m. Beginning with secondary high tide at 7:46 p. m. the wind became stronger, with occasional gales, during the night, attaining a maximum velocity of 58 miles an hour at 1:42 a. m.on the 18th, when it became southeast, blowing from that direction until 6:45 p. m. The wind then backed slowly through east and north to northwest. Sudden downpours of rain were frequent on the 18th and 19th. The total rainfall on the 18th was but 0.62 inch and on the 19th 3.04 inches. During a period of 49 minutes, from 8:48 to 9:37 a. m. on the 19th, 1.16 inch of rain fell.

There is no doubt that greater damage to property resulted from the effects of high tides than from the wind. This was especially the case in the rice-growing districts of the Ashepoo and Combahee rivers, where at least one-fourth of the crop was destroyed by the overflow. Roughly it is estimated that such losses may amount to at least $75,000. No loss of life occurred in this section and property losses in the vicinity of Charleston were small. Here also the tides caused the greatest amount of damage. Although warnings had been given of expected high tides large quantities of perishable goods were allowed to remain in basements, resulting in its damage. On the morning of the 19th the normal high tide was due to reach 6.3 feet, but owing to the storm a height of 8.55 feet was attained, a stage sufficient to cover the low-lying portions of the city and to inundate many basements. The injury to small boats and rafts insecurely fastened will not exceed $3,000.—*R. Q. Grant, Local Forecaster.*

The hurricanes of October, 1910, have been described in more than the usual detail because of their intrinsic interest and because the remarkably small loss of life and of vessels at sea shows so emphatically the value of the modern system of storm warnings. Without the knowledge of the position, path, and force of the storms obtained by the Weather Bureau and widely disseminated to threatened points the loss of life and of property would undoubtedly have been appalling. The low pressure observed by Captain Sullivan of the steamship *Jean*, 27.80 inches (corrected), ranks among the lowest pressures recorded on the earth's surface. It may be of interest to state that the lowest sea-level pressure ever observed was 27.02 inches on August 2, 1891, during a typhoon in the China Sea. (Hann. Meteor., 2d ed., page 155.)

TABLE 1—*Climatological data for October, 1910. District No. 2, South Atlantic and east Gulf States.*

Stations.	Counties.	Elevation feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Virginia.																				
Arvonia	Buckingham	350	6	60.6	+ 3.6	89	16	23	30	41	4.74	+ 1.39	2.15	0.0	7	22	4	5	w.	Rev. P. F. Jones.
Ashland‡‡	Hanover	221	19	60.2	+ 2.9	86	1	27	30	32	4.78	+ 1.13	2.23	0.0	6	16	12	3	s.	E. L. C. Scott.
Buchanan‡‡	Botetourt	820	6								4.04		1.10	0.0	6					D. D. Booze.
Callaville	Brunswick	250	16																	F. M. Gage.
Cape Henry	Princess Anne	20	36	64.5	+ 2.4	87	6	36	31	25	2.96	− 0.92	1.28	0.0	7	19	5	7	sw.	U. S. Weather Bureau.
Charlottsville	Albemarle	800	21	61.6	+ 4.2	89	1	29	30	33	5.45	+ 1.94	1.82	0.0	6	20	5	6	s.	Leander McCormick.
Clarksville‡‡	Mecklenburg		16								5.18	+ 2.64	1.78	0.0	4					J. Henry Ligon.
Columbia	Fluvanna	246	12	59.8		85	1†	28	31	35	5.13		1.50	0.0	7	19	5	7	sw.	Chesapeake & Ohio R. R.
Danville‡‡	Pittsylvania	413	10								3.36		1.46	0.0	6					C. G. Watkins.
Diamond Springs	Princess Anne	20		63.8		89	6	28	31	32	4.03		1.15	0.0	7	20	4	7		Virginia Experiment Sta.
Hampton	Elizabeth City	5	27	65.0	+ 3.6	83	1†	31	30	22	3.39	− 0.02	1.33	0.0	6	17	7	7	sw.	Hampton Institute.
Hot Springs	Bath	2,195	18	54.8	+ 3.5	77	16	18	30	35	3.08	− 0.10	0.96	T.	7	20	6	5		James P. Scott.
Ivor	Southampton	87	1	59.0		85	15†	25	30	45	7.30		5.00	0.0	4					N. & W. Ry., Exp. Farm.
Lassiter	Goochland	100									3.59		1.74	0.0	6	24	3	4		T. J. Davis.
Lexington	Rockbridge	1,060	33	58.4	+ 4.2	87	1	19	30	40	3.37	+ 0.39	1.31	0.0	8	20	5	6		Virginia Military Institute.
Lynchburg	Campbell	685	39	60.4	+ 3.5	86	1	27	30	37	5.09	+ 1.71	2.65	0.0	7	16	9	5	nw.	U. S. Weather Bureau.
New Castle‡‡	Craig	1,300	1								4.95		1.43	0.0	4					Miss J. L. Martin.
Newport News	Warwick	55	7	65.6		89	6†	33	30	28	4.96		2.48	0.0	8	20	6	5	ne.	Ernest W. Sniffen.
Norfolk	Norfolk	91	40	63.8	+ 2.7	86	6	36	30	27	3.33	− 0.35	1.71	T.	7	17	7	7	s.	U. S. Weather Bureau.
Petersburg	Dinwiddie	60	23	61.6[j]	+ 3.3	87	6	28	30	....	4.41	+ 1.21	2.00	T.	3	....	....	....	n.	Central State Hospital.
Randolph‡‡	Charlotte	334	6								3.30		1.14	0.0	5					W. B. Spencer.
Richmond	Henrico	144	31	61.0	+ 1.2	87	6	31	31	33	5.03	+ 1.71	2.14	0.0	10	13	12	6	s.	U. S. Weather Bureau.
Rocky Mount	Franklin	1,150	16	60.2	+ 3.0	85	1†	20	30	41	4.40	+ 0.45	2.86	0.0	7					G. W. B. Hale.
Saxe	Charlotte	350	7	61.6		89	6	21	30	39	4.59		1.50	0.0	6	27	2	2	sw.	State Experiment Farm.
Spottsville (near)	Surrey	15	22	60.8	+ 3.0	87	5†	26	31	33	7.00	+ 3.04	5.00	0.0	7	17	6	8	sw.	B. W. Jones.
Williamsburg	James City	70	19	62.0[d]	+ 3.0	87	5†	29	30	35	3.94	+ 0.47	1.60	0.0	6	....	....	....	ne.	Eastern State Hospital.
North Carolina.																				
Beaufort	Carteret	10	8	69.4		86	7	37	30	26	2.51		1.07	0.0	11	25	5	1	sw.	H. D. Aller.
Belhaven	Beaufort	4	1	65.3		90	7	27	30†	38	4.15		3.43	0.0	3	23	4	4	nw.	W. S. Hopkins.
Brewers	Wilkes	1,950	13	61.5[c]	+ 2.7	90[c]	2	21[c]	30	47[c]	5.53	+ 1.27	2.58	0.0	8	19	7	5	w.	W. L. Brewer.
Caroleen	Rutherford	806	10	62.4	+ 2.6	85	5	23	30	36	4.24	+ 1.79	2.12	0.0	7	19	8	4	ne.	S. B. Tanner.
Chalybeate Springs	Harnett	500	4	62.2[b]		88[b]	2	25[b]	30†	43[b]	2.91		1.22	T.	7	23	4	4	nw.	J. A. Smith.
Chapel Hill	Orange	500	52	63.4	+ 3.5	88	2†	26	30	39	5.63	+ 2.38	1.60	T.	6	19	8	4	sw.	Prof. A. H. Patterson.
Charlotte	Mecklenburg	773	34	63.7	+ 2.6	91	2	28	30	31	4.01	+ 0.86	2.42	0.0	8	18	5	8	ne.	U. S. Weather Bureau.
Chimney Rock	Rutherford	1,150	....	64.0		88	2	26	30	35[a]	5.01		2.54	0.0	9	21	2	8	w.	J. M. Flack.
Clinton	Sampson	156	3																	W. T. Boyette.
Durham (near)	Durham	406	1								7.09		3.17	0.0	4					Supt. Durham Water Co.
Eagletown	Northampton	66	5	62.8		88	6	27	30	31	3.20		1.93	T.	8	20	9	2	sw.	J. T. Elliott.
Edenton	Chowan	30	16	64.4	+ 3.0	86	7	28	30†	33	2.23	− 2.20	0.85	0.0	5	20	4	7	nw.	E. R. Conger.
Enfield (near)	Halifax	99									3.67		1.69	0.0	4					T. S. Inborden.
Fayetteville	Cumberland	170	23	66.1	+ 4.1	91	2	28	30†	42	3.20	− 0.29	1.78	T.	6					Frank Glover.
Goldsboro	Wayne	102	40	64.2	+ 2.7	86	6	27	30	39	2.36	− 0.84	1.81	0.0	6				n.	Mrs. N. B. Taylor.
Graham	Alamance	656	8								6.10		3.04	T.	7					Dr. W. R. Goley.
Greensboro	Guilford	843	29	63.2	+ 3.0	91	2	26	30	41	4.40	+ 1.49	1.60	0.0	4				ne.	A. R. Horry.
Greenville	Pitt	75	17								2.49	− 0.79	1.48	0.0	7					R. M. Hearne.
Hatteras	Dare	11	36	69.0	+ 3.0	84	20	41	30	22	1.45	− 4.56	0.79	0.0	8	20	8	3	nw.	U. S. Weather Bureau.
Henderson	Vance	508	17	61.0	+ 1.3	84	3	28	30	32	4.93	+ 1.77	2.08	T.	6	18	10	3	nw.	Enoch Powell.
Kinston	Lenoir	46	12	65.7	+ 3.3	90	6	26	30†	41	2.24	− 0.39	1.48	0.0	8	24	4	3	n.	H. C. V. Peebles.
Lenoir	Caldwell	1,188	37	60.6	+ 4.1	95	2	19	30	44	6.33	+ 3.01	2.15	0.0	7	23	1	7	n.	G. M. Goforth.
Lexington	Davidson	810	9																	H. R. Berrier.
Lincolnton	Lincoln	994	5	61.4		91	1	20	30	40	4.22		3.18	0.0	4	18	7	6	nw.	S. P. Houser.
Louisburg	Franklin	375	19	62.4	+ 3.5	92	6	28	30†	35	3.39	+ 0.49	1.54	T.	4	26	2	3	sw.	T. B. Wilder.
Lumberton	Robeson	102	27	66.1	+ 4.4	96	2	26	31	44	1.71	− 1.51	0.84	0.0	5				n.	B. M. Davis.
Manteo	Dare	12	5	66.1		86	1	30	31	30	4.05		1.98	0.0	8	18	7	6	ne.	U. S. Weather Bureau.
Marion	McDowell	1,425	18	62.2	+ 3.7	93	2	20	30	49	3.80	− 0.43	1.69	T.	10	19	7	5	w.	Sgt. Thomas McGuire.
Moncure	Chatham	145	16	63.2	+ 3.3	88	6	25	30†	44	3.87	+ 1.38	1.24	T.	6	23	1	7	nw.	B. J. Utley.
Monroe	Union	586	16	63.9	+ 4.9	94	2	22	30	41	4.23	+ 0.74	1.15	0.0	6	21	7	3	ne.	T. A. Ashcraft.
Morganton	Burke	1,135	23	61.7	+ 4.4	90	2	21	30	42	3.94	+ 0.32	1.40	0.0	9	24	3	4	se.	H. D. Judd.
Mt. Airy	Surry	1,048	22	61.6	+ 5.5	89	1†	23	30	42	5.03	+ 2.34	2.76	0.0	11	24	2	5	ne.	Prof. A. H. Merritt.
Mt. Holly	Gaston	616	13								5.94	+ 2.98	3.50	0.0	5					J. W. Holland.
Nashville	Nash	190	6	62.8		89	17	27	30	37	4.34		2.03	T.	5	16	10	5	n.	J. B. Boddie.
Newbern	Craven	12	28	64.4	+ 1.6	90	7	26	30	40	2.56	− 1.25	1.02	0.0	9				ne.	J. B. Hill.
Pinehurst‡	Moore	650	6	64.8		89	2†	27	30	38	5.57		2.05	0.0	8	19	6	6	ne.	General Office.
Pittsboro	Chatham	480	19	62.2	+ 3.4	86	6	26	31	38	4.12	+ 1.13	1.60	0.0	5	24	3	4		B. M. Poe.
Raleigh	Wake	390	39	63.8	+ 3.3	86	6	30	30	30	3.54	+ 0.04	1.47	T.	6	15	12	4	ne.	U. S. Weather Bureau.
Ramseur	Randolph	442	3	63.7		93	2	20	31	53	4.10		2.05	T.	8	21	10	0	n.	A. H. York.
Randleman	...do	810	5								4.90		1.73	0.0	7					J. R. Walton.
Reidsville	Rockingham	828	11	62.8	+ 5.2	89	16	25	30	39	4.37	+ 1.88	2.06	0.0	7	20	3	8	ne.	E. M. Redd.
Rock House	Macon	3,100	18	57.7	+ 2.0	80	2	19	30	32	3.53	− 1.32	1.74	0.5	10	19	6	6	nw.	B. C. Hawkins.
Rockingham	Richmond	210	15	64.6[a]	+ 3.0	91[a]	2	25[a]	30	40[a]	2.68	− 0.69	1.50	0.0	5	....	....	....		H. S. Ledbetter.
Rocky Mount	Nash	105									2.49		2.40	0.0	3					W. H. Calcutt.
Roxboro	Person	600	12			85[k]	16	25[k]	30	35[k]										N. Lunsford.
Salem	Forsythe	1,000	15	61.1	+ 3.4	85	1	21	30	40	3.34	+ 0.66	2.24	T.	3					Rev. H. E. Rondthaler.
Salisbury	Rowan	760	26	64.4	+ 4.1	92	2	23	30	41	3.35	+ 0.17	1.30	0.0	4	23	1	7	n.	Miss Thelma Wilkinson.
Saxon	Stokes	900	18	60.4	+ 2.9	85	1†	22	30	37	3.07	+ 0.09	1.62	0.0	5	14	9	8	sw.	R. P. McAnnaly.
Scotland Neck	Halifax	80	6	61.4		86	6	26	30	33[a]	2.59		1.74	0.0	5	18	5	8	nw.	J. Y. Savage.
Selma	Johnston	225	20																	Dr. R. J. Noble.
Settle	Iredell	700	14			91	2	42[j]	11	34[j]	3.20	+ 0.55	1.64	0.0	4	19	3	9	sw.	C. H. Smith.
Sloan	Duplin	50	17	65.6	+ 2.9	88	2†	26	30†	40	1.17	− 2.87	0.91	0.0	6	22	3	6	n.	D. M. Sholar.
Snow Hill	Greene	80	5	65.0[a]		90[a]	6	25[a]	30	40[a]	2.12		1.26	0.0	3	21	7	3	n.	L. J. H. Mewborn.
Southern Pines	Moore	519	20	65.6	+ 3.4	91	2	27	30	29	4.18	+ 0.96	1.55	0.0	7	22	4	5	ne.	Mrs. P. H. Beck.
Southport	Brunswick	18	55	69.0	+ 3.2	89	5	29	30	31	2.31	− 2.56	0.92	0.0	4	23	5	3	e.	Mrs. C. E. Taylor.
Statesville	Iredell	950	22	61.8	+ 5.1	88	2	22	29†	44	4.48	+ 1.08	2.30	0.0	6	19	7	5	sw.	D. M. Thompson.
Tarboro	Edgecombe	50	25	65.0	+ 3.9	91	5†	27	31	41[a]	1.80	− 1.79	1.05	0.0	5	18	5	8	nw.	E. V. Zoeller.
Troy	Montgomery	800	1																	Mrs. O. B. Deaton.
Weldon	Halifax	81	38	63.8	+ 4.5	93	6	28	31	39	4.27	+ 0.83	1.71	0.0	8				n.	H. S. S. Cooper.
Whiteville	Columbus	59	5	65.9		91	2	22	31	44[b]	2.02		0.70	0.0	5	21	5	5	se.	Rev. C. C. Smith.
Willard	Pender	51	2	64.5		87	6	26	30†	40[a]	2.29		0.80	0.0	4	21	6	4	n.	J. H. Jefferies.
Wilmington	New Hanover	52	39	66.8	+ 3.5	88	2	31	30	30	1.72	− 2.02	1.01	0.0	7	17	12	2	ne.	U. S. Weather Bureau.
Yanceyville	Caswell	690	....																	A. Y. Kerr.
South Carolina.																				
Aiken	Aiken	565	26	67.0	+ 3.3	89	2	30	29	30	2.18	− 0.42	1.10	0.0	3	26	5	0	w.	Dr. Huger T. Hall.
Allendale	Barnwell	186	22	67.0	+ 2.5	90	2†	26	30†	37	5.69	+ 3.41	1.55	0.0	5	16	8	7		A. R. Hiers.
Anderson	Anderson	764	9	64.5	0.0	94	2	22	30	39	2.45	− 0.38	1.90	0.0	6	23	0	8	w.	H. H. Russell.
Batesburg	Lexington	656	22	66.9	+ 4.3	96	2	27	30	34	4.39	+ 1.32	1.48	0.0	5	23	1	7	s.	E. J. Hite.
Blackville	Barnwell	296	22	67.5	+ 3.4	93	1	27	29	41	4.93	+ 2.07	1.70	0.0	5	22	3	6	ne.	Miss M. E. Lange.
Blairs	Fairfield	293	6								3.65		2.00	0.0	4	16	7	8	s.	John R. Ragsdale.

TABLE 1.—*Climatological data for October, 1910. District No. 2*—Continued.

Stations.	Counties	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
South Carolina—Cont'd.																				
Bowman	Orangeburg	100	9																	B. O. Evans.
Calhoun Falls	Abbeville	508	17								2.35	− 0.42	1.96	0.0	3	26	2	3	sw.	M. L. Crisp.
Camden	Kershaw	222	44								2.76	+ 6.04	1.00	0.0	7	24	2	5	ne.	W. C. Brown.
Catawba	York	562	5								6.93		3.80	0.0	6	22	1	8	n.	Jas. C. Faris.
Chappells	Newberry	402	5								3.04		2.36	0.0	5	22	1	8	w.	W. R. Zimmerman.
Charleston	Charleston	48	40	70.0	+ 2.9	86	2	37	30	28	6.18	+ 2.21	3.36	0.0	7	18	8	5	n.	U. S. Weather Bureau.
Cheraw	Chesterfield	144	22	65.6	+ 4.9	92	2	26	30	44	5.01	+ 2.34	3.51	0.0	7	20	7	4	.....	J. H. Powe.
Clemson College	Oconee	850	19	62.1	+ 1.0	85	2†	25	30	34	1.40	− 1.38	1.30	0.0	2	26	0	4	ne.	Prof. John N. Hook.
Columbia	Richland	351	23	66.2	+ 2.2	91	2	29	30	34	3.01	+ 0.16	1.51	0.0	5	20	8	3	ne.	U. S. Weather Bureau.
Conway	Horry	25	18	67.4	+ 4.6	92	2	30	31	36	6.05	+ 2.75	2.35	0.0	8	20	1	10	se.	P. C. Quattlebaum.
Darlington	Darlington	175	15	68.6[a]		99	7	26	31	43	3.07	+ 0.45	2.14	0.0	6	24[a]	3[a]	3[a]	.....	D. C. McCall.
Dillon	Dillon	100	6	67.4	+ 4.2	95	2	27	30†	45	2.56	− 0.51	1.34	0.0	5				.....	A. E. Rowell.
Effingham	Florence	106	18								4.72	+ 1.79	1.62	0.0	5	25	0	6	e.	H. B. McCall.
Ferguson	Berkeley	51	2								5.53		2.00	0.0	6	23	1	7	n.	Pierre Gaillard.
Florence	Florence	136	22	69.8	+ 6.9	97	2	29	31	48	4.64	+ 1.79	2.21	0.0	4	23	2	6	ne.	H. K. Gilbert.
Georgetown	Georgetown	12	17	68.4	+ 3.6	88	2	32	30	28	6.35	+ 2.97	3.00	0.0	5	18	10	3	n.	A. P. Hazard.
Greenville	Greenville	989	18	64.4	+ 4.6	91	2	25	30	47	2.95	+ 0.19	1.45	0.0	7	24	0	7	ne.	Mrs. S. A. Crittenden.
Greenwood	Greenwood	671	22	65.9	+ 4.3	99	2	27	30	41	3.81	+ 1.26	2.21	0.0	7	23	0	8	w.	M. M. Calhoun.
Heath Springs	Lancaster	568	9	65.7		96	3	28	30†	30	2.82		1.34	0.0	6	22	6	3	w.	J. A. Weaner.
Jacksonboro	Colleton	13	2																	W. E. Haskell, jr.
Kingstree	Williamsburg	54	22	68.0	+ 3.7	90	2	29	31	36	4.70	+ 2.20	2.30	0.0	5	17	2	12	ne.	A. O. Matthews.
Liberty	Pickens	900	16	64.2	+ 4.3	90	2	22	30	39	1.45	− 1.42	0.35	0.0	7	20	7	4	sw.	Jno. T. Boggs.
Little Mountain	Newberry	711	17	68.4	+ 4.9	89	2	28	30	31	3.42	+ 0.61	1.90	0.0	4	27	0	4	s.	Dr. J. M. Sease.
Meriwether	Edgefield		1	65.0[c]		93[c]	4	25[c]	29†	41	3.49		2.42	0.0	3	15	2	8	.....	W. S. Middleton.
Newberry	Newberry	502	6	65.3	+ 3.4	94	2	25	30	38	3.97	+ 1.13	2.40	0.0	8	20	6	5	w.	W. G. Peterson.
Pelzer	Anderson	873	5								3.28		1.82	0.1	5	23	1	7	w.	John M. Ward.
Pinopolis	Berkeley	55	17								7.93	+ 4.95	4.00	0.0	5				.....	Miss E. P. Ravenel
St. George	Dorchester	109	22	68.2	+ 4.3	90	3	30	31	33	3.83	+ 1.67	1.70	0.0	5	25	0	6	.....	G. F. Lewis.
St. Matthews	Calhoun	209	22	66.2	+ 2.6	85	2	29	31	33	3.75	+ 1.30	1.60	0.0	4	22	0	9	.....	J. S. Wannamaker.
Saluda	Saluda	530	8																	Alvin Etheridge.
Santuc	Union	512	15	64.6	+ 3.7	100	2	24	30	41	4.04	+ 0.91	2.22	0.0	6	16	11	4	nw.	E. W. Jeter.
Smith Mills	Williamsburg	62	15								6.67	+ 3.23	2.23	0.0	8	23	1	7	e.	W. G. Walker.
Society Hill	Darlington	192	19	63.8	+ 2.5	87	2	30	29†	30	2.94	− 0.17	1.38	0.0	6	23	4	4	sw.	Major J. J. Lucas.
Spartanburg	Spartanburg	875	19	64.2	+ 3.5	97	2	24	30	38	4.24	+ 1.76	2.50	0.0	5	18	1	12	.....	F. P. Robinson.
Summerville	Dorchester	75	13	68.2	+ 3.8	90	2	29	30	36	7.29	+ 4.64	4.34	0.0	8	9	20	2	sw.	Miss E. H. Gadsen.
Trenton	Edgefield	620	17	67.8	+ 3.9	95	2	29	30	30	3.62	+ 0.48	2.00	0.0	5	21	8	2	s.	C. A. Long.
Trial	Berkeley	85	23																	Etsell Gaillard.
Walterboro	Colleton	69	6	70.2		97	2	28	31	45	8.10		3.86	0.0	7	20	5	6	.....	J. A. Westerberg.
Winnsboro	Fairfield	545	21	65.4	+ 2.1	90	1†	30	30†	27	4.49	+ 1.39	2.45	0.0	7	22	9	0	ne.	John W. Seigler.
Winthrop College	York	690	11	64.8	+ 3.8	93	2	27	30	32	5.90	+ 3.47	3.03	0.0	6	26	2	3	se.	E. R. Rivers.
Yemassee	Hampton	23	15	66.6	+ 2.2	88	4	29	30	32	9.32	+ 6.75	2.67	0.0	5	22	0	9	.....	J. G. Hutson.
Georgia.																				
Abbeville	Wilcox		7								4.36		1.80	0.0	8	15	0	16	n.	W. H. Calhoun.
Adairsville	Bartow	772	18	65.9[b]	+ 4.9	87[b]	2	32[d]	30							16[d]	6[d]	5[d]	.....	Dr. J. P. Bowdoin.
Albany	Dougherty	230	25	70.8[a]	+ 3.4	94[a]	1	32	29	37[a]	3.64	+ 1.35	1.36	0.0	7	23	1	7	ne.	Geo. C. Brosnan.
Allapaha	Berrien	293	21	70.6	+ 4.2	92	1†	31	30†	35	2.28	− 0.23	0.72	0.0	8	8	13	10	ne.	James T. Austin.
Americus	Sumter	362	27	67.6	+ 1.5	90[a]	2	29	30†	34[a]	2.53	+ 0.28	2.00	0.0	4	24	2	5	nw	F. P. Harrold.
Athens	Clarke	694	33	65.1	+ 5.8	90	20	25	30	38	2.28	− 0.22	1.63	0.0	6	23	0	8	ne.	C. D. Cox.
Atlanta	Fulton	1,218	45	64.5	+ 3.0	89	2	30	29	26	2.90	+ 0.59	1.93	T.	5	19	4	8	ne.	U. S. Weather Bureau.
Augusta	Richmond	180	44	67.0	+ 2.8	89	2	29	30	34	4.25	+ 1.97	3.53	0.0	5	22	6	3	nw.	U. S. Weather Bureau.
Bainbridge	Decatur	119	18	71.8	+ 3.9	95	1†	29	30†	46	3.38	+ 1.93	1.52	0.0	5	22	1	8	nw.	Mrs. C. O. Wimberley.
Barnesville	Pike	875	2																	Prof. T. O. Galloway.
Blakely	Early	300	19																	Ralph M. Hobbs.
Butler	Taylor	650	8								1.53		0.91	0.0	5	20	0	11	n.	Mrs. Mamie F. Wallace.
Camak	Warren	613	17	65.2	+ 2.2	94	2	24	30	39	3.00	+ 0.48	1.80	0.0	5	24	0	7	.....	J. A. Chapman.
Canton	Cherokee	894	17								1.51	− 1.25	0.58	T.	5	23	2	6	n.	G. W. Evans.
Carlton	Madison	557	11								3.10	+ 0.93	2.38	0.9	4	25	0	6	w.	M. C. Power.
Clayton	Rabun	2,100	17	61.6	+ 4.8	85	2	21	30	39	3.58	− 0.41	1.28	T.	5	25	2	4	w.	A. J. Duncan.
Columbus	Muscogee	262	23	67.8	+ 1.7	92	2	30	30†	37	1.96	− 0.75	1.12	0.0	6	21	3	7	nw.	A. J. Land.
Covington	Newton	800	17								2.23	− 0.65	1.65	0.0	5	16	8	7	e.	Mrs. Sarah E. Cruse.
Cuthbert	Randolph	446	11	69.5	+ 4.4	95	2	30[a]	29†	40[a]	1.87		0.80	0.0	3	20	8	3	.....	Prof. W. McMichael.
Dahlonega	Lumpkin	1,519	18	62.4	+ 3.0	86	2	21	30	40	3.11	+ 0.12	1.20	T.	10	18	9	4	nw.	Prof. B. P. Gaillard.
Diamond	Gilmer	2,020	20	60.8	+ 3.8	84	2	20	30	40	2.64	− 0.51	1.22	0.3	7	23	3	5	.....	R. A. Kimsey.
Dublin	Laurens	452	16								3.18	+ 1.42	1.60	0.0	6	22	2	7	.....	Mrs. M. E. Martin.
Dudley	do		8	68.3		93	2	29	31	38	2.65		1.53	0.0	5	21	8	2	ne.	J. H. M. O'Sullivan.
Eastman	Dodge	361	19	70.4	+ 4.5	95	1	31	30	42	4.26	+ 2.05	2.35	0.0	7	15	8	8	e.	Miss A. M. Bohannon.
Eatonton	Putnam		7	65.6		92	2	24	30	36	2.73		1.30	0.0	7				.....	Prof. W. C. Wright.
Elberton	Elbert	710	19	66.2	+ 3.4	94	2	26	30	39	3.41	+ 1.73	1.51	0.0	7	24	5	2	w.	H. A. Roebuck.
Experiment	Spalding	946	10	66.0	+ 3.2	86	2†	29	30	28	2.22	+ 0.25	1.17	0.0	4	15	11	5	.....	Martin V. Calvin.
Fort Gaines	Clay	166	23	70.2	+ 4.9	95	1	29	30†	42	3.06	+ 0.76	1.13	0.0	3	20	1	10	ne.	Mrs. Eva T. Graham.
Gainesville	Hall	1,254	34	61.8	+ 1.8	90	2	20	30	43	2.52	− 0.15	0.97	0.0	5	22	0	9	w.	W. C. Walker.
Gillsville	do	1,052	20	64.9	+ 2.8	91	2	24	30	32	2.79	+ 0.19	1.45	0.0	4	23	4	4	w.	J. W. Casey.
Glennville	Tatnall		5	67.8		87	2	31	31	35	6.58		2.45	0.0	8	24	3	4	nw.	Wm. C. Barnard.
Gore	Chattooga		12	64.1	+ 3.6	93	2	23	30	45	1.72	− 2.57	0.71	T.	8	22	4	5	s.	H. M. Ponder.
Greensboro	Greene	598	8	65.2		93	2	24	30	43	4.15		3.10	0.0	5	22	2	7	w.	R. L. Caldwell.
Griffin	Spalding	975	21	64.8	+ 1.5	89	2	26	30	39	2.27	− 0.33	1.20	0.0	6	18	3	10	ne.	V. P. Enloe.
Harrison	Washington	245	12	66.6	+ 2.4	91	2	27	30†	44	4.09	+ 1.85	2.20	0.0	6	25	3	3	e.	A. W. J. Wood.
Hartwell	Hart	838	2								3.04		1.70	0.0	6	24[a]	0[a]	6[a]	se.	Dr. W. I. Hailey.
Hawkinsville	Pulaski	235	15	68.6	+ 4.2	92	5†	26	30	40	2.11	− 0.69	0.90	0.0	9	16[c]	7[c]	5[c]	.....	R. H. Wood.
Helena	Telfair	260	3	69.4		94	2	28	31	40	2.29		1.02	0.0	9	13	5	13	e.	James D. Smith.
Lafayette	Walker	871	4	62.0		85	3†	21	30	39	3.85		1.07	T.	6	19	5	7	w.	Ralph A. Snow.
Lisbon	Lincoln		4	65.7		95	2	21	31	41	3.28		1.54	0.0	7	25	2	4	.....	B. J. DuBose.
Lost Mountain	Cobb		10	64.0	+ 2.2	91	1	24	29	36	3.36	+ 0.85	2.10	T.	4	7	22	2	n.	A. N. Mayes.
Louisville	Jefferson	259	18	66.6	+ 2.2	87	2†	28	30	33	4.81	+ 2.54	3.69	0.0	5	21	7	3	.....	J. C. Little.
Lumber City	Telfair		2								4.34		1.64	0.0	9	18	4	9	e.	Walter A. Hilton.
Lumpkin	Stewart	650	17	71.8	+ 5.8	94	1†	29	29	41[b]	3.29	+ 0.74	1.32	0.0	4	11	19	1	ne.	A. W. Latimer.
Macon	Bibb	370	33	66.5	+ 2.0	90	2	28	30	35	3.25	+ 1.21	2.91	0.0	5	19	8	4	n.	U. S. Weather Bureau.
Marshallville	Macon	500	18					24	30											E. C. Bryan.
Mauzy	Colquitt		12	71.6	+ 3.6	93	1†	31	31	37	1.80	− 0.37	0.84	0.0	5	21	4	6	e.	T. J. Hudson.
Milledgeville	Baldwin	276	22	66.5	+ 2.5	89	2†	26	30	34	3.82	+ 1.60	3.45	0.0	5	25	1	5	ne.	Prof. O. M. Cone.
Millen	Jenkins	158	23	69.0	+ 4.1	93	2	26	30	41	3.65	+ 1.09	1.95	0.0	5	22	0	9	ne.	M. G. McComb.
Montezuma	Macon	292	5								3.02		1.46	0.0	7	20	2	9	w.	R. E. Fokes.
Monticello	Jasper	800	14	66.2	+ 3.4	91	2	26	30	37	4.04	+ 1.37	3.36	0.0	6	20	0	11	.....	Miss Maude C. Penn.
Morgan	Calhoun	337	18			89	2				4.09	+ 1.80	1.20	0.0	5	20	9	2	nw.	W. J. Ragan.
Newnan	Coweta	959	22	65.5	+ 3.5	91	2	25	30	46	1.42	− 1.31	0.50	0.0	4	19	3	9	e.	Mrs. I. J. Milner.
Norcross	Gwinnett	1,078									3.54		1.22	0.0	6	21	2	8	.....	W. O. Medlock.
Point Peter	Oglethorpe	1,000	21	65.4	+ 5.1	87	6	26	30	36	3.45	+ 0.87	2.75	0.0	4	24	3	4	se.	C. M. Witcher.

TABLE 1.—*Climatological data for October, 1910. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Georgia—Cont'd.																			
Poulan	Worth	365	19	69.8	+ 4.2	91	2†	29	31	40	4.18	+ 1.76	2.23	0.0	6	23	4	4	.....	Dr. J. F. Wilson.
Putnam	Marion	.....	11	67.8	+ 2.9	95	1†	25	30	40	1.55	− 1.30	0.70	0.0	3	18	8	5	w.	Mrs. J. M Collum.
Quitman	Brooks	173	26	70.8	+ 3.2	92	1†	30	31	40	3.69	+ 1.60	1.27	0.0	6	22	1	8	ne.	A. B. Jones.
Ramsey	Murray	1,363	17	63.6	+ 2.5	85	3	25	30	35	1.46	− 1.42	0.60	0.0	5	23	3	5	n.	D. E. Humphreys.
Resaca	Gordon	657	17	.....	.....	.....	.....	.....	.....	.....	1.88	− 0.57	0.80	0.0	4	.....	.....	.....	.....	D. A. Norton.
Rome	Floyd	576	55	63.9	+ 2.1	93	2	23	30	42	1.98	− 0.70	0.90	T.	4	22	2	7	nw.	W. M. Towers.
St. George	Charlton	.....	4	71.5	.....	89	2	35	30	29	7.13	.....	4.05	0.0	13	15	13	3	ne.	A. N. Lund.
St. Marys	Camden	20	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	David C. Sterling.
Savannah	Chatham	65	60	69.4	+ 2.5	89	21	34	30	25	4.65	+ 1.61	2.42	0.0	8	18	7	6	se.	U. S. Weather Bureau.
Statesboro	Bulloch	253	10	69.2	+ 3.5	95	2†	30	31	36	5.93	+ 4.00	2.15	0.0	6	19	10	2	.....	J. C. Cromley.
Talbotton	Talbot	750	17	67.4	+ 3.8	95	2	23	30	47	1.29	− 2.02	0.78	0.0	4	22	5	4	ne.	Dr. E. L. Bardwell.
Tallapoosa	Haralson	1,150	18	64.8	+ 3.3	92	2	23	30	42	3.56	+ 0.86	1.55	0.0	5	19	5	7	ne.	Elmer C. Bishop.
Thomasville	Thomas	273	27	70.0	+ 1.5	90	2†	30	31	36	5.09	+ 1.95	2.38	0	8	17	8	6	ne.	U. S. Weather Bureau.
Toccoa	Stephens	1,050	25	63.2	+ 2.9	87	2	26	30	30	1.22	− 1.85	0.55	0.0	4	23	0	8	w.	Mrs. Alice Starke.
Valdosta	Lowndes	219	5	72.3	.....	95a	2	29	31	46a	2.82	.....	1.02	0.0	3	17	1	13	n.	Miss Annie Twitty.
Valona	McIntosh	10	10	.....	.....	.....	.....	.....	.....	.....	8.96	+ 4.97	4.85	0.0	5	20	7	4	ne.	J. M. Atwood.
Washington	Wilkes	630	23	66.0	+ 3.4	93	2	31	29†	38	5.28	+ 2.78	2.15	0.0	6	22	0	8	ne.	Miss Ella B. Smith.
Waycross	Ware	131	21	70.8	+ 2.8	90	2†	33	30†	35	8.33	+ 5.83	2.15	0.0	13	24	0	7	ne.	Thomas Sasser.
Waynesboro	Burke	86	19	68.8d	+ 5.6	93d	2	25	30	40d	3.80	+ 1.54	3.10	0.0	6	21	2	8	w.	Mrs. H. W. Blount.
West Point	Troup	620	22	67.5	+ 3.8	93	2	27	30	41	1.62	− 1.11	0.88	0.0	5	20	1	10	ne.	E. N. Dunn.
Woodbury	Meriwether	641	10	65.4a	+ 4.9	91	12	23	31	42a	1.80	− 0.68	0.87	0.0	3	13a	3a	10a	.....	G. A. Wright.
Florida.																				
Apalachicola	Franklin	24	5	72.8	.....	87	20	38	29†	26	3.21	.....	2.32	0.0	4	14	16	1	se.	G. H. Whiteside.
Arcadia	De Soto	61	8	73.0	.....	92	8	43	30†	30	13.16	.....	4.75	0.0	19	13	6	12	e.	C. S. Bushnell.
Archer	Alachua	92	24	72.7	+ 1.4	90	4†	32	30	31	4.44	+ 1.93	1.73	0.0	5	.....	.....	.....	.....	R. B. Hodgson.
Avon Park	De Soto	150	11	73.4	− 1.1	91	8†	45	27	38	12.49	+ 8.68	5.60	0.0	14	11	6	14	ne.	O. R. Thacher.
Bartow	Polk	115	13	73.9	− 0.4	91	1†	42	30	38	12.55	+ 9.39	5.47	0.0	18	11	10	10	ne.	Wm. Hood.
Blountstown	Calhoun	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. L. Hobbs.
Bonifay	Holmes	111	8	71.1	.....	93	1	29	30†	39	4.23	.....	1.30	0.0	5	.....	.....	.....	ne.	Wm. Rush.
Brooksville	Hernando	126	17	74.0a	+ 1.2	92a	4†	37a	30	31	6.35	+ 3.93	2.65	0.0	9	18	4	9	ne.	C. C. Peck.
Carrabelle	Franklin	10	13	70.6	− 0.1	89	8	32	30	27	3.70	+ 0.78	1.70	0.0	4	.....	.....	.....	.....	J. J. Blomquist.
Cedar Keys	Levy	10	12	74.6	+ 2.7	90	1†	38	30†	31	2.69	− 0.12	1.20	0.0	8	21	0	10	ne.	J. B. Lutterloh.
Clermont	Lake	105	16	75.0	+ 0.6	94	8	45	28	42	13.56	+10.89	6.00	0.0	6	9	16	6	e.	S. S. Fesler.
DeFuniak Springs	Walton	193	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. W. Storrs.
DeLand	Volusia	27	13	71.4	− 0.4	86	8†	40	30	29	14.28	.....	7.77	0.0	15	10	14	7	.....	Dr. O. B. Webster.
Eustis	Lake	56	17	73.8	+ 1.0	91	10†	40	31	31	10.14	+ 7.51	.....	0.0	.....	.....	.....	.....	se.	C. T. Smith.
Federal Point	Putnam	5	17	73.4	+ 2.1	90	21	42	29†	25	11.99	+ 7.31	3.95	0.0	13	16	10	5	ne.	E. S. Hubbard.
Fenholloway	Taylor	75	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss E. Wigglesworth.
Fernandina	Nassau	10	12	72.9	+ 1.6	87	20†	40	29	30	5.26	+ 0.01	3.25	0.0	13	17	10	4	ne.	W. B. C. Duryee.
Fort Meade	Polk	125	17	73.8	+ 0.7	94	1	38	30	36	13.60	+10.18	5.85	0.0	14	13	7	11	se.	G. L. Broderick.
Fort Myers	Lee	12	17	73.2a	− 2.0	85b	1†	47	30	21	13.26	+10.21	5.65	0.0	13	18	8	5	se.	Miss M. M. Gardner.
Fort Pierce	St. Lucie	6	18	74.4	− 1.1	88	10†	49	30	25	12.79	+ 7.28	2.84	0.0	15	8	7	16	e.	T. J. O'Brien.
Gainesville	Alachua	176	23	72.4	+ 2.0	91	2†	37	30	38	6.70	+ 4.39	3.87	0.0	12	15	5	11	ne.	J. P. H. Bell.
Grasmere	Orange	175	13	73.5	+ 1.1	92	5	41	29	30	8.58	.....	6.30	0.0	12	13	8	10	.....	J. B. Escott.
Hilliard	Nassau	69	1	71.6	.....	90	21	35	30†	32	7.81	.....	3.40	0.0	11	.....	.....	.....	.....	The Hilliard Co.
Homestead	Dade	5	...	76.6	.....	91	21	53	30	33	15.12	.....	2.62	0.0	19	13	12	6	se.	W. J. Krone.
Huntington	Putnam	56	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Walker.
Hypoluxo	Palm Beach	4	9	78.9	− 0.4	91	20	55	29	27	27.81	+17.68	9.70	0.0	17	15	5	11	e.	G. A. Angevine.
Inverness	Citrus	43	8	73.0	.....	89	1†	37	30	29	3.32	+ 1.49	2.10	0.0	6	5	18	8	ne.	W. H. Miller.
Jacksonville	Duval	101	37	72.0	+ 2.4	87	21	37	30	25	8.02	+ 2.96	4.96	0.0	13	16	8	7	ne.	U. S. Weather Bureau.
Jasper	Hamilton	152	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. W. Duncan.
Johnstown	Bradford	125	14	73.8	+ 3.1	91	2†	35	29	32	6.09	+ 3.23	3.96	0.0	11	23	4	4	.....	A. M. C. Brasch.
Jupiter	Palm Beach	34	21	75.4	− 1.4	86	2	50	29	26	20.88	+11.40	8.64	0.0	19	8	15	8	se.	U. S. Weather Bureau.
Key West	Monroe	14	38	77.8	− 0.9	87	4	59	30	14	10.95	+ 5.57	4.12	0.0	14	11	11	9	e.	Do.
Kissimmee	Osceola	65	17	74.6	0.0	90	1	43	30	27	11.65	+ 7.47	4.65	0.0	11	7	17	7	ne.	J. A. Simpson.
Lake City	Columbia	210	20	72.4	+ 2.5	93	5†	36	29†	31	3.96	+ 1.31	1.90	0.0	10	12	14	5	ne.	W. B. Knight.
Live Oak	Suwanee	109	8	73.2	.....	95a	3	36	29	35	4.75	+ 2.44	1.90	0.0	6	14	12	5	e.	D. O. Henry.
Macclenny	Baker	125	13	.....	.....	.....	.....	.....	.....	.....	5.71	+ 3.14	2.00	0.0	6	.....	.....	.....	.....	Griffing Bros. Co.
Madison	Madison	200	6	72.0	.....	92	1†	35	30	31	4.41	+ 1.98	1.53	0.0	9	9	12	10	ne.	E. J. Vann.
Malabar	Brevard	24	8	74.7	.....	91	5	45	29†	32	12.62	.....	2.85	0.0	17	13	6	12	se.	J. F. Farley.
Manatee	Manatee	8	17	73.6	− 0.3	89	5	46	30	26	7.23	+ 4.58	1.70	0.0	12	13	14	4	.....	W. P. Fuller.
Mariana	Jackson	80	9	70.5	.....	92	20	30	30	39	2.15	.....	1.48	0.0	5	23	2	6	ne.	W. J. Watson.
Meritts Island	Brevard	20	30	73.2	− 2.3	84a	9†	48	29	23	13.84	+ 7.22	4.16	0.0	18	.....	.....	.....	e.	F. Ulrich.
Miami	Dade	5	13	77.2	− 0.2	91	20	53	30	24	21.45	+11.76	5.00	0.0	11	13	6	12	e.	E. V. Blackman.
Miami (Subtrop. Gar.)	....do	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Edwars Simmonds.
Middleburg	Clay	10	8	72.2f	.....	89	20†	33	31	35	7.50	.....	.....	.....	.....	.....	.....	.....	.....	G. A. Chalker.
Molino	Escambia	49	8	69.2	.....	93	3	27	30	40	2.62	.....	1.35	.....	3	23	2	6	n.	W. H. Trimmer.
Monticello	Jefferson	207	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. C. Potter.
Mount Pleasant	Gadsden	260	5	70.4	.....	93	20	28	31	40	2.87	.....	1.15	0.0	5	.....	.....	.....	ne.	Miss Addie Grubb.
Newport	Wakulla	.....	8	70.0	.....	89	1†	30	30	43	4.25	− 0.77	1.84	0.0	4	23	3	5	sw.	J. M. Ladd.
New Smyrna	Volusia	9	21	72.8a	− 0.2	89	12	43	29	36	11.00	+ 5.04	3.52	0.0	13	.....	.....	.....	.....	F. Nordman.
Ocala	Marion	98	22	72.8	+ 0.8	94	1†	34	30	39	4.98	+ 2.44	.....	0.0	.....	7	20	4	.....	Dr. F. T. Schreiber.
Orange City	Volusia	39	19	72.4	− 0.7	92	21	42	29	34	10.97	+ 6.96	5.66	0.0	10	12	10	9	e.	J. D. Graham.
Orlando	Orange	111	17	74.0	+ 0.6	89	8†	44	29†	30	11.73	+ 7.47	8.02	0.0	14	8	8	15	ne.	Jas. Thompson.
Pensacola	Escambia	149	31	71.0	+ 0.6	86	19	35	29	23	3.94	− 0.14	1.69	0.0	6	15	8	8	ne.	U. S. Weather Bureau.
Plant City	Hillsborough	121	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. B. Trask.
Rockledge	Brevard	28	1	74.0	.....	88	20	46	29	22	10.24	.....	3.76	0.0	16	11	9	11	se.	Rev. J. H. White.
Rockwell	Marion	10	10	74.2f	.....	91	1	38	29	31	3.10	+ 1.38	1.75	0.0	4	.....	.....	.....	se.	Dunellon Phos. Co.
St. Andrew	Washington	14	14	.....	.....	88	1†	.....	.....	.....	3.71	− 0.18	0.88	0.0	10	23	7	1	se.	W. A. Emmons.
St. Augustine	St. Johns	10	59	73.6	+ 1.4	89	9	40	29	25	11.14	+ 6.17	5.00	0.0	12	11	8	12	e.	J. R. Palmer.
Sand Key	Monroe	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
St. Leo	Pasco	140	14	72.5	− 0.6	88	1	39	30	26	9.66	+ 7.34	3.54	0.0	15	11	10	10	e.	G. Schneider.
Satsuma Heights	Putnam	98	1	71.0	.....	88	9	36	30	28	13.31	.....	5.47	0.0	10	12	13	6	.....	The Satsuma Co.
Switzerland	St. Johns	10	13	72.6	+ 2.4	88	2†	41	29†	27	9.18	+ 5.14	6.03	0.0	17	.....	.....	.....	.....	W. C. Steele.
Tallahassee	Leon	192	24	70.7	+ 2.8	89	1	34	26	27	2.55	− 0.58	1.90	0.0	3	21	2	8	n.	W. H. Markham.
Tampa	Hillsborough	79	19	73.6	+ 1.0	89	2	43	30	24	5.17	+ 2.20	1.72	0.0	12	10	9	12	ne.	U. S. Weather Bureau.
Tarpon Springs	....do	20	16	73.9	+ 1.0	92	2	39	30	29	5.86	+ 3.88	1.34	0.0	12	14	8	9	e.	A. P. Albaugh.
Titusville	Brevard	6	17	.....	.....	.....	.....	44	29	....	7.99	+ 2.92	2.70	0.0	18	4	8	19	se.	F. M. Taylor.
Wausau	Washington	250	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Curtis Jones.
Alabama.																			
Alaga	Houston	105	5	.....	.....	.....	.....	.....	.....	.....	2.66	.....	1.38	0.0	3	20	2	9	e.	James L. Willis.
Anniston	Calhoun	741	19	64.3	+ 1.9	90	2	25	30	38	3.76	+ 1.42	1.76	0.0	6	20	5	6	n.	U. S. Weather Bureau.
Ashville	St. Clair	685	17	64.3	+ 3.2	89	1†	23	30	50	1.79	− 0.36	0.90	0.0	4	22	2	7	se.	George R. Cather.
Auburn	Lee	732	28	68.7	+ 4.6	95	1	29	29†	36	1.99	− 0.85	1.56	0.0	3	15	11	5	ne.	Dr. James T. Anderson.
Benton	Lowndes	149	9	.....	.....	.....	.....	.....	.....	.....	3.86	.....	2.23	0.0	6	24	3	4	ne.	S. T. Pruitt.
Bermuda	Conecuh	.....	23	67.6	+ 3.1	89	20	28	30	39e	1.05	− 1.44	0.72	0.0	4	21	3	4	se.	M. J. Morris.
Birmingham	Jefferson	700	22	66.0	+ 1.6	91	2	27	29	33	2.42	+ 0.08	1.71	0.0	4	15	8	8	n.	U. S. Weather Bureau.

TABLE 1.—*Climatological data for October, 1910. District No. 2*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall untelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Alabama—Cont'd.																				
Calera	Shelby	500	9								3.79		1.60	0.0	3	23	3	5	e.	L. G. Privett.
Camp Hill	Tallapoosa	738	9	63.9		92	1†	26	30	47	1.87		0.57	0.0	3	27	2	2	nw.	Dr. Lyman Ward.
Cedar Bluff	Cherokee	594	6								2.20		0.80	0.0	4	18	13	0		Joe L. Daniel.
Citronelle	Mobile	331	22	70.6	+ 2.6	91	1	31	29	31	5.74	+ 2.86	2.06	0.0	12	19	4	8	n.	George A. Maloney.
Clanton	Chilton	390	17	66.2	+ 3.2	93	2	27	30	39	4.00	+ 1.78	1.35	0.0	7	18	0	13	se.	Wallace C. Edler.
Cochrane	Pickens																			E. L. Rose.
Cordova	Walker	334	19	65.4	+ 3.2	92	3	26	29	41	5.15	+ 2.76	3.10	0.0	4	19	7	5	s.	Scott Maxwell.
Cullman	Cullman	802	2	64.2		91	2	24	30	43	3.80		1.40	T.	6	20	3	8	nw.	Eugene A. Grayot.
Dadeville	Tallapoosa	760	5								2.95		0.90	0.0	4	20	2	9	e.	Dr. W. B. Fulton.
Daphne	Baldwin		19	70.6	+ 2.1	91	3	33	29	29[a]	4.83	+ 0.80	1.45	0.0	8	15	5	10	ne.	John H. Young.
Demopolis	Marengo		18								4.12	+ 2.15	2.40	0.0	5	20	5	6	nw.	George E. Pegram.
Eufaula	Barbour	200	26	65.8	+ 1.0	88	1†	27	30†	39	1.56	− 0.81	0.64	0.0	5	23	2	6	n.	Dr. J. B. Whitlock.
Evergreen	Conecuh	285	26	70.2	+ 5.4	97	1	28	30	46	0.30	− 1.86	0.12	0.0	3	18	0	13	n.	Robert L. Whitcomb.
Flomaton	Escambia	91	18	71.0	+ 5.3	91	3	27	30	48	1.19	− 1.32	0.43	0.0	6	24	6	1	n.	T. J. Farris.
Fort Deposit	Lowndes	520	26	67.0	+ 2.2	93	1	28	30	36	2.53	+ 0.29	1.10	0.0	6	21	6	4	s.	J. F. Hattemer.
Gadsden	Etowah	621	26	67.0	+ 5.3	94	2	25	30	42	2.54	− 0.05	2.00	0.0	5	18	1	12	ne.	D. P. Goodhue.
Goodwater	Coosa	826	15	65.5	+ 1.7	93	2	25	31	39	2.60	+ 0.23	1.75	0.0	5	25	0	6	sw.	D. S. Brown.
Greensboro	Hale	220	31	67.1	+ 2.8	89	1†	31	29	29	3.26	+ 1.19	2.20	0.0	4	19	1	11	s.	W. E. W. Yerby.
Greenville	Butler	444	9								1.92		0.51	0.0	5	25	0	6		E. M. Lewis.
Hamilton	Marion		14	66.2	+ 4.5	98	1†	25	29†	47[a]	2.66	+ 0.03	1.22	0.0	5	15	3	13	n.	Prof. H. O. Sargent.
Highland Home	Crenshaw		18	69.6	+ 3.4	92	1	30	29	37	3.89	+ 1.50	2.08	0.0	6	22	4	5	ne.	Prof. Samuel Jordan.
Livingston	Sumter	160	26	65.6	+ 2.2	89	1†	28	30	45	2.53	+ 0.51	1.43	0.0	5	21	0	10	w.	Robert L. King.
Lock No. 4	Talladega	510	13	65.8	+ 3.3	93	1	26	30	40	3.23	+ 0.92	1.25	0.0	6	23	0	8	n.	U. S. Engineers.
Lucy	Houston		5																	A. L. Crosby.
Maple Grove	Cherokee		17	64.4	+ 3.9	95	2	25	29	43	2.24	− 0.33	1.50	0.0	4	18	10	3	nw.	Mrs. A. L. Awbrey.
Mentone	DeKalb	1,595	3								3.75		2.42	0.2	5	22	1	8	nw.	E. Mason.
Milstead	Macon		7								2.28		1.04	0.0	4	16	12	3	ne.	Evie Oswalt.
Mobile	Mobile	57	38	70.5	+ 3.4	89	1	36	29	29	7.45	+ 4.27	4.27	0.0	8	18	10	3	n.	U. S. Weather Bureau.
Montgomery	Montgomery	240	38	68.4	+ 2.7	92	2	31	30	33	1.41	− 1.03	0.68	0.0	7	20	4	7	ne.	Do.
Newbern	Hale		17	67.8	+ 2.4	95	2	27	29	38	3.77	+ 1.83	2.53	0.0	4	16	7	8	e.	Dr. J. Huggins.
Oneonta	Blount	857	16	64.8	+ 4.5	91	2†	22	30	42	2.98	+ 0.40	2.05	T.	6	18	2	11	n.	Aquilla J. Ketchum.
Opelika	Lee	817	31	65.4	+ 2.4	87	2	30	30	28	1.78	− 1.17	0.92	0.0	4	21	0	10	e.	A. H. Read, jr.
Ozark	Dale	400	8	68.9		91	2	21	29	32	5.00		1.40	0.0	6	21	7	3	n.	Miss Lucy Sellers.
Prattville	Autauga	281	10			92	2							0.0					e.	Jos. B. Bell.
Pushmataha	Choctaw		19	66.5	+ 2.6	92	1†	26	30	40	3.14	+ 0.92	1.36	0.0	8	17	7	7	ne.	E. A. Carr.
Selma	Dallas	147	30	65.6	− 0.1	89	5	29	29†	38	2.92	+ 0.90	1.30	0.0	7	17	9	5	n.	Charles F. Brislin.
Spring Hill	Mobile	312	6	70.0		91	1	34	29	29	9.73		5.18	0.0	9	13	10	8	n.	Spring Hill College.
Talladega	Talladega	554	20																	Dr. Charles S. Northen.
Tallassee	Elmore		19								2.63	+ 0.63	1.16	0.0	4	23	2	5	ne.	P. A. Noble.
Thomasville	Clarke	385	19	65.1	+ 0.5	90	2	26	29	37	3.55	+ 1.82	2.84	0.0	5	20	0	11	n.	J. G. Forster.
Troy	Pike	581	2	67.8		94	1	26	29	39	1.64		0.65	0.0	7	19	8	4	ne.	C. S. Tutwiler.
Tuscaloosa	Tuscaloosa	230	29	66.7	+ 3.3	95	1	28	29	38	3.57	+ 1.71	2.55	0.0	8	19	1	11	n.	W. S. Wyman, jr.
Tuskegee	Macon		10	70.2	+ 3.1	96	1†	28	30†	49	2.11	+ 0.03	0.99	0.0	3	8	23	0	n.	Prof. George W. Carver.
Union Springs	Bullock	216	23	67.2	+ 2.6	88	2†	20	29	34	2.71	− 0.27	0.87	0.0	5	14	14	3	e.	P. L. Cowan.
Uniontown	Perry	273	24	68.2	+ 1.9	91	2	28	29	37[a]	4.24	+ 2.25	2.51	0.0	8	17	9	5	nw.	F. D. Stevens.
Valley Head	DeKalb	1,031	25	64.5	+ 5.7	92	2	23	30	44	3.38	+ 0.49	1.85	T.	5	22	6	3	n.	M. T. Floyd, M. D.
Wetumpka	Elmore	205	18	69.5	+ 3.5	97	2	28	29†	41	2.29	+ 0.09	1.38	0.0	3	24	0	7	n.	U. S. Engineers.
Mississippi.																				
Aberdeen	Monroe	210	22	64.9	+ 3.8	95	1	27	29†	41	3.23	+ 1.26	1.04	0.0	5	20	1	10	n.	L. D. Godfrey, jr.
Agricultural College	Oktibbeha	424	20	67.6	+ 3.2	94	2	26	29	40	2.76	+ 0.79	1.50	0.0	5	16	10	5	n.	E. R. Lloyd.
Bay St. Louis	Hancock	28	17	70.6	+ 1.6	89	16†	35	29†	30	3.39	+ 0.51	0.93	0.0	9	15	7	9	ne.	Brother Stanislaus.
Biloxi	Harrison	24	19	71.4	+ 2.7	90	1†	35	29	32	6.04	+ 3.06	2.10	0.0	8	17	8	6	ne.	Miss M. Josie Pope.
Booneville	Prentiss	504	16	61.7[k]	0.0	89	1†	28	29	31[k]	3.32	+ 0.73	1.56	0.0	6	14[k]	4[k]	2[k]	se.	Dr. D. T. Price.
Brookhaven	Lincoln	500	22	67.6	+ 2.2	93	1	27	29	44	2.67	+ 0.27	1.76	0.0	9	17	2	12	e.	W. J. Bee.
Columbia	Marion	110	6								3.32		1.96	0.0	7	20	2	9	n.	N. R. Drummond.
Columbus	Lowndes	191	22	65.6	+ 2.3	95	2	26	29†	44	3.54	+ 1.23	1.75	0.0	5	18	3	10	ne.	J. B. Love.
Crystal Springs	Copiah	468	18	66.6	+ 0.7	90	1	28	29	41	4.87	+ 2.28	2.35	0.0	7	23	7	1		D. H. Miller.
Edinburg	Leake		2	64.9		92	1†	25	29†	43	3.31		1.45	0.0	7	18	6	7	w.	J. Y. Blocker.
Enterprise	Clarke	248	5								1.77		0.91	0.0	7					J. B. Thompson.
Fulton	Itawamba		1								2.71		0.60	0.0	8	20	2	9	n.	A. L. Summers.
Hattiesburg	Forest	189	17	68.2	+ 2.3	92	2	28	30	44	1.98	+ 0.14	1.92	0.0	2	19	2	10	n.	T. C. Spence.
Hazlehurst	Copiah	460	20	68.8[d]	+ 3.0	93[f]	14	28[b]	29	45[b]	5.45	+ 2.87	2.05	0.0	9	19	0	12	s.	J. D. Granberry.
Hickory	Newton	326									2.76		2.26	0.0	3	14[c]	6[c]	8[c]	ne.	A. C. Hailey.
Jackson	Hinds	280	23	67.6	+ 3.4	95	1	27	30	44	2.58	+ 0.50	1.44	0.0	5	19	4	8	ne.	B. H. Klyce.
Lake	Scott	446	22	65.5	+ 3.2	90[a]	2	26	30	39[a]	3.28	+ 1.10	1.20	0.0	6	19	1	11	nw.	Mrs. Eddie McNeel
Lake Como	Jasper		7					25	30					0.0		10[j]	7[j]	4[j]	e.	C. Thigpen.
Laurel	Jones	241	8	68.9		93	1	27	29	41	3.61		1.48	0.0	9	21	4	6	ne.	Thomas W. Flynt
Leakesville	Greene		16	69.4	+ 2.5	94	1	27	30	44[a]	3.54	+ 0.93	2.87	0.0	5	20[a]	6[a]	4[a]		Dr. Sam Pool.
Louisville	Winston	561	21	66.8	+ 3.0	93	2	27	30	40	2.82	+ 0.92	2.14	0.0	4					B. T. Webster.
McNeill	Pearl River	230	7	69.6		91	1	30	29†	36	4.17		1.62	0.0	10	13	11	7	nw.	Prof. E. B. Ferris.
Macon	Noxubee	185	22	66.2	+ 3.0	95	3	27	29†	44	2.83	+ 0.53	1.13	0.0	7	19	3	9	nw.	Finis E. Carleton.
Magnolia	Pike	415	14	68.4	+ 1.6	91	1	28	30	38	2.19	− 0.41	1.69	0.0	7	11	13	7	n.	Miss Ruby V. Roberts
Meridian	Lauderdale	375	20	65.6	+ 2.6	88	2	28	30	35	2.80	+ 0.10	1.54	0.0	9	15	7	9	ne.	U. S. Weather Bureau.
Merrill	Greene	76	5								3.28		1.50	0.0	8	21	0	10	n.	L. C. Helms.
Monticello	Lawrence	209	3	67.4		95	1	24	30	45	4.59		1.80	0.0	8	15	12	4	e.	Dr. G. A. Teunisson.
Okolona	Chickasaw	311	22	65.6	+ 3.8	94	1	27	29	37	2.18	+ 0.71	0.85	0.0	5	18	3	10	n.	D. H. Shell.
Pascagoula	Jackson	15	1	71.4		88	4†	33	29†	36	5.82		1.92	0.0	9	16	6	9	sw.	Frederick Hess.
Pearlington§	Hancock	10	22	69.0	+ 1.6	87	14	32	29†	31[b]	3.88	+ 1.07	1.72	0.0	7	13[b]	8[b]	8[b]	sw.	Miss Annette Koch.
Porterville	Kemper		5	67.2		92	2	25	30	44	2.47		1.20	0.0	5	16	5	10	nw.	I. S. Rea.
Shubuta	Clarke	197	5								2.58		1.28	0.0	8					Geo. A. Floyd.
Waynesboro	Wayne	191	23	66.1	+ 1.8	95	3	25	30	44	2.06	+ 1.13	1.60	0.0	7	16	4	11	n.	R. S. Burke.
Woodland	Chickasaw		1								3.95		1.65	0.0	5					Tallahatchie Drain. Com.
Louisiana.																				
Pearl River	St. Tammany		5								3.04		0.96	0.0	7	21	9	1	e.	Geo. F. Bancks.

[a], [b], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
¶ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 2, South Atlantic and east Gulf States.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Virginia.																															
Arvonia	James							.56	2.15	.13										.60	.84		.35					T.	.11				4.74
Ashland	do							.56	1.58											.90	1.33						.11		.30				4.78
Buchanan[‖]	do	.26						.93	.89	.68											1.10		.18										4.04
Callaville	Chowan																																
Cape Henry	Coast							1.28	.05	.28										.83	.08	T.	27			T.			.17				2.96
Charlottesville	James							1.68	1.82	.23										.35	.86		.51										5.45
Clarksville[‖]	Roanoke	.98							1.12	1.30											1.78												5.18
Columbia	James							1.50	1.00	.40									T.	.90	.42		.33					.48					5.13
Danville[‖]	Roanoke	.41		.43			T.	T.		.96										.06	1.46						.04		T.				3.36
Diamond Springs	Coast							1.15	.36	.39										.89	.79		.04						.41				4.03
Hampton	do						.66	.44	.26											.60	1.33		T.			T.			.10				3.33
Hot Springs[‖]	James							.57	.35	.33									.04		.96		.64						.24	T.	T.		3.08
Ivor	Chowan							.40	1.00											.90	5.00												7.30
Lassiter	James							.70	1.45											.19	.35	.72		.15					.22				3.59
Lexington	do					.02		.60	1.31											.58	.09	.01		.65				.03					3.37
Lynchburg	do							1.26	2.61											.80	.02		.28					.08	.04				5.09
New Castle[‖]	do							1.33	1.07												1.43		1.12										4.95
Newport News	Coast							1.02	.28	.30											2.48	.59	.03	.01					.25				4.96
Norfolk	do							.80	.35	.28										1.58	.13		.01			T.		T.	.18				3.33
Petersburg	James						T.	*	*	2.00										1.10	1.31							T.	T.				4.41
Randolph[‖]	Roanoke							.06	.90	1.14		T.									1.06		.14										3.30
Richmond	James						.05	1.25	1.14	.03										1.73	.41		.14			.06		.08	.14				5.03
Rocky Mount	Roanoke							.22	2.86										.10	.61	.37		.20					.04					4.40
Saxe	do							.90	1.50	.70										.50	.90		.09										4.59
Spottsville (near)	Chowan						1.41	.13	T.											4.00	1.00		.04			T.		.06	.36				7.00
Williamsburg	James							.78	.76	.50										.35	1.25		T.						.30				3.94
North Carolina.																															
Beaufort	Bogue Sound						.17	.09	1.07	.16	.03				.30				.02	.14	.47						.04		.02				2.51
Belhaven	Pungo																			.43	3.43								.29				4.15
Brewers	Pedee			T.			.68	2.58	1.82											.33	.01					.03		.05	.03				5.53
Carolcen	Santee				.02	.10	.63	.48	2.12											.79								.10					4.24
Chalybeate Springs	Cape Fear			T.			.33	1.22	.37											.65	.31					.01			.02	T.			2.91
Chapel Hill	do	T.					.25	1.25	1.60											1.10	1.40					T.		.03		T.			5.63
Charlotte	Santee			.18	.33	T.	.02	1.67	1.13											.58	T.	.09	.01					T.					4.01
Chimney Rock	do				.13		.26	2.54	1.75							.06				.20	.02			.04					.01				5.01
Clinton	Cape Fear																																
Durham (near)[‖]	Neuse						.79	1.90	1.23											3.17													7.09
Eagletown	Chowan						T.	.37	.20	.35										1.15	.80		.08			.04			.21	T.			3.20
Edenton	Albemarle Sound								.78											.85	.25					.25			.10				2.23
Enfield (near)[‖]	Tar								1.69	.44											1.52								T.	.02			3.67
Fayetteville[‖]	Cape Fear	.04						.10	1.08	.20										.02	1.76								T.		T.		3.20
Goldsboro[‖]	Neuse							T.	.31	.20										.02	1.79						.02		.02				2.36
Graham[‖]	Cape Fear	.01				.09		.45	1.50	.98										T.	3.04								.03	T.			6.10
Greensboro[‖]	do							.15	1.60	1.25											1.40												4.40
Greenville[‖]	Tar								.62	.23										.08	1.48	.03							.04	.01			2.49
Hatteras	Pamlico Sound						.07	.66	.13	.19				.13						.07	.07					.13							1.45
Henderson	Tar and Roanoke						.27	2.08	1.35											.91	.14					T.		.18		T.			4.93
Kinston	Neuse						T.	.46	.07	.11									T.	.40	1.08		.04			.06			.02				2.24
Lenoir	Santee				.40	.27	.75	2.15	1.90											.76								.10					6.33
Lexington	Pedee																																
Lincolnton	Santee				.08		.13			3.18										.83													4.22
Louisburg[‖]	Tar	.18							1.54	.82											.85								T.	T.			3.39
Lumberton[‖]	Lumber								.61	.11										.11	.84								.04				1.71
Manteo	Roanoke Sound							.30	.17	.12					.62					1.98	.38		.42		.06								4.05
Marion	Santee		.03		.03	.16	.17	1.69	1.28	.08										.30			.05						T.	.01			3.80
Moncure[‖]	Cape Fear	.30						.41	1.06	.82											1.24								.04		T.		3.87
Monroe	Pedee				.51			1.12	1.06	.09										1.15	.30												4.23
Morganton	Santee				.04	.09	.39	1.00	1.40	.05				T.						.60	.34		T.					.03					3.94
Mount Airy	Pedee			.19	T.	.10	.05	.98	2.76	.03										.45	.23		.12					.06	.04				5.03
Mount Holly[‖]	Santee				.72	T.		.26	3.50	.76											.70												5.94
Nashville[‖]	Tar	.03							1.86	.42											2.00	.03								T.			4.34
Newbern[‖]	Neuse						.07	T.	.17	.05						.83	.22			.04	1.02	.06					.10							2.56
Pinehurst	Lumber	.25					.18	2.05	.83	.17										.50	1.55								.04				5.57
Pittsboro	Cape Fear						.10	1.10	1.60											1.20	.12												4.12
Raleigh	Neuse						.03	1.42	.43	.16					T.					1.47	T.					T.			.03	T.			3.54
Ramseur	Cape Fear	.03			.01		.01	.47	2.05	.03										.80	.70									T.			4.10
Randleman[‖]	do	.05				.02		1.06	1.73	1.08					T.					.06	.90												4.90
Reidsville[‖]	do			.02				.07	1.14	1.00										T.	2.06						.03		.05				4.37
Rock House	Savannah				.03	.06	.67	1.74	.48							.05				.10		.02						.33	.05				3.53
Rockingham	Pedee						.10	1.50	.28										.10	.70													2.68
Rocky Mount[‖]	Tar								.05	.04											2.40												2.49
Roxboro	Roanoke																																
Salem	Pedee							.40	2.24											.70													3.34
Salisbury[‖]	do					.25			1.30	.90											.90												3.35
Saxon[‖]	Roanoke							.15	1.62										.10	1.10		.10											3.07
Scotland Neck	Tar							.32	.15											1.74	.27					T.			.11				2.59
Selma	Neuse																																
Settle	Pedee				T.	.13	T.	.85	1.64											.58													3.20
Sloan	Cape Fear						.04	.14		.05					T.					.53	.38								.03				1.17
Snow Hill	Neuse								.01											.85	1.26												2.12
Southern Pines	Cape Fear	1.15			T.		.20	.48	.30	.15										.35	1.55												4.18
Southport	do						T.		.41	.12										.92	.86							T.					2.31
Statesville	Pedee					.08		1.12	2.30	.09										.80							.09						4.48
Tarboro[‖]	Tar								.26	.32											1.05		.01						.16				1.80
Troy	Pedee																																
Weldon[‖]	Roanoke	.02							1.41	.96											1.71	.02		.01		T.		.10	.04				4.27
Whiteville	Waccamaw							.38	.28	.08										.70	.58												2.02
Willard	Cape Fear					T.		.80								.19				.55	.75												2.29
Wilmington	do						T.	.57	.05	.01									.20	.82	.06		.01					T.					1.72
Yanceyville	Roanoke																																
South Carolina.																																	
Aiken	Edisto							.55	1.10											.53													2.18
Allendale[‖]	Savannah							.23	1.55	1.36										1.40	1.15												5.69
Anderson	do						.20	1.03	.97	.03										.15								.07					2.45
Batesburg[‖]	Edisto				T.			.32	1.48	1.37					T.					.56	.66								T.				4.39
Blackville[‖]	do							.11	1.57	.95										.60	1.70												4.93
Blairs[‖]	Broad								2.00	.70										.20	.75												3.65
Bowman	Edisto																																
Calhoun Falls[‖]	Savannah								1.96	.04											.35												2.35
Camden	Wateree	.16			.20			.14	1.00	.10										.24	.92												2.76
Catawba[‖]	Catawba				1.10	.10			3.80	.64										.14	1.15												6.93
Chappells[‖]	Saluda						.14		2.36	.16										.12		.26												3.04
Charleston	Ocean				.16	.41	T.	.71	1.13	.11					T.	T.			.62	3.04	T							T.					6.18
Cheraw[‖]	Pedee	.30			T.			.09	.90	.19										.18	3.33								.02				5.01

TABLE 2.—*Daily precipitation for October, 1910. District No. 2*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
South Carolina—Cont'd																																	
Clemson College	Savannah								1.30											.10												1.40
Columbia	Congaree			T.	T.	T.	.23	1.00	.69	.04									T.	1.05								T.				3.01
Conway‖	Waccamaw	.87				T.		.07	2.35	.33							.06			1.25	1.09								.03			6.05
Darlington‖	Pedee	T.			.21	.05		.25												.40	2.14								.02			3.07
Dillon	Little Pedee			T.			T.	.33	.50	.22					T.					1.34			T.					.07			2.56
Effingham‖	Lynches	1.62							.94	.78									.40	.98							T.				4.72
Ferguson‖	Santee					.60		.14	2.00	.24										1.59		.96										5.53
Florence‖	Pedee							T.	1.48	.35						T.				.60	2.21		T.									4.64
Georgetown	Ocean				T.		.70	.80	.90					T.						.95	3.00											6.35
Greenville‖	Saluda						.15	10	1.45	.55										.07	.33								.30			2.95
Greenwood‖	...do						.33	.10	2.21	.31										.10	.71								.09			3.81
Heath Springs	Waterce					.08	.10	.15		.70	.45									1.34												2.82
Jacksonboro	Edisto																															
Kingstree‖	Black					.10			2.30	.10										.70	1.50											4.70
Liberty	Savannah					.10	.05	.20	.35	.30										.10								.35				1.45
Little Mountain	Saluda				.07	T.		.45	1.90											1.00												3.42
Meriwether	Savannah					.30			2.42										.77								T.					3.49
Newberry	Saluda					.07	.02	.40	2.40	.06										.97	.03							.02				3.97
Pelzer‖	...do						.26	.24	1.82	.64					T.					T.	.32											3.28
Pinopolis	Cooper				.90		.10		2.30											4.00	.63											7.93
St. George‖	Edisto					.09			1.70	.33										.67	1.04											3.83
St. Matthews‖	Santee							.35	1.60											.55	1.25											3.75
Saluda	Saluda																															
Santuc	Broad				.22	T.	.07	.66	2.22										T.	.79	.08							T.				4.04
Smith Mills‖	Pedee	1.28						T.	.78	.43						.11				1.16	2.23	.50							.18			6.67
Society Hill	...do					.22	.30	.08	.94					.02						1.38								T.				2.94
Spartanburg‖	Broad						.73	.26	2.50											T.	.70								.05			4.24
Summerville	Ashley			.05	T.	.14	T.	.32	1.98	.16					T.				.22	4.34	.08											7.29
Trenton	Edisto					.33	.08	.17	2.00											1.04												3.62
Trial	Santee																															
Walterboro	Ashepoo				T.		T.	.91	2.53	.28					.20				.28	3.86	.04											8.10
Winnsboro	Broad			.10	T.	.02	.07	2.45	.45										.95	.45												4.49
Winthrop College	Catawba				.30	T.		1.53	3.03	.08										.84	.12	T.										5.90
Yemassee‖	Combahee					T.			2.65	2.67						.97				2.33	.70											9.32
Georgia.																																
Abbeville‖	Ocmulgee				.09	.05	T.	1.20	1.80	.25										.75	.06								.16			4.36
Adairsville‖	Coosa																															
Albany‖	Flint				.20	.12	.02		1.36	1.03											.10								.81			3.64
Allapaha‖	Allapaha				.35	.07		.04	.72	.30										.37	.04								.39			2.28
Americus‖	Flint				.08				2.00	.24																			.24			2.53
Athens‖	Oconee					.06			1.63	.28					.03						.05								.23			2.28
Atlanta	Chattahoochee				.03	T.	.29	1.72	.61											T.								.25	T.			2.90
Augusta	Savannah					T.	.07	1.36	1.97										.02	.63							T.					4.25
Bainbridge‖	Flint				1.52	T.			.50	.18						.12													1.06			3.38
Barnesville	...do																															
Blakely	Chattahoochee																															
Butler‖	Flint				.10	.15			.85	.06																			.37			1.53
Camak‖	Savannah							.15	1.80	.44										.40	.21		T.						T.			3.00
Canton‖	Coosa					.11	T.	.12	.58	.30										T.	.15								.40	T.		1.51
Carlton‖	Savannah								2.38	.41																			.16			3.10
Clayton	Savannah		.71	.15	1.10	1.28																							.34	T.		3.58
Columbus‖	Chattahoochee			.06	.01	T.		.16	1.12	.04	T.																		.57			1.96
Covington‖	Ocmulgee					23		.10	1.40	.25																			.25			2.23
Cuthbert‖	Chattahoochee		.50					.80																				.57				1.87
Dahlonega	...do				.07	.41	.01	1.20	1.02	.01										.01			.03					.30	.05	T.		3.11
Diamond	Tennessee				T.	.20	.10	1.22	.45													.03						.61	T.	.03		2.64
Dublin‖	Oconee					.12	.28	.14	1.60	.54										.40	T.											3.18
Dudley	...do				.51	.03	T.	.28	1.25	T.									T.	.58							T.					2.65
Eastman‖	Ocmulgee				.06	.70		.35	2.35	.20										.57	T.								.03			4.26
Eatonton	Oconee				.23	.03		.90	1.30											.02								.16	.09			2.73
Elberton	Savannah					.30	.15	.95	1.51	.05										.30								.15				3.41
Experiment	Chattahoochee				.50			.20	1.17																			.35				2.22
Fort Gaines‖	...do							T.	1.13	.75																			1.18			3.06
Gainesville‖	...do						.20	.15	.97	.80																			.40			2.52
Gillsville	Oconee				T.	.02	T.	1.45	1.02																			.30				2.79
Glennville‖	Altamaha				.32		.37	.58	2.45						.29				2.36	.16								.03				6.58
Gore	Coosa				.12	.02	.03	.68	.17	.01												.04	T.					.65	T.			1.72
Greensboro‖	Oconee					.74			3.10											.06	.12								.13			4.15
Griffin‖	Chattahoochee				.10	.20		.18	1.20	.24											T.								.35			2.27
Harrison	Ogeechee				.63		.20	.35	2.20											.48								.03				4.09
Hartwell	Savannah						.34	.28	.16											1.70	.32								.24			3.04
Hawkinsville‖	Ocmulgee				.12	.20	.10	.10	.90	.04										.55	.04								.06			2.11
Helena	...do		.04	.20	T.	.07	1.02	.64	.09	T.	.01								.01	.21		1.07	T.		.73				T.			2.29
Lafayette	Tennessee						.80	.60	.18																				.47			3.85
Lisbon	Savannah					.25	.21	1.00	1.54											.23	.02							.03				3.28
Lost Mountain	Chattahoochee				.05		.57	2.10																		.64		T.	T.			3.36
Louisville	Ogeechee				.15	.25	.25		3.60											.47												4.81
Lumber City‖	Ocmulgee				.24	.04	T.	.66	1.64	.52							.16			.90	.10								.08			4.34
Lumpkin‖	Chattahoochee		1.29		.18			1.32	T.																			.50				3.29
Macon	Ocmulgee				.07			2.61	.31											.10								.16				3.25
Marshallville‖	Flint																															
Mauzy	Suwanee		.40					.19	.07										T.	.30									.84			1.80
Milledgeville‖	Oconee					T.		.15	3.34	.11										20	.02								T.			3.82
Millen‖	Ogeechee							.45	1.95	.30										85	.10											3.65
Montezuma‖	Flint			.46	.12			.06	1.46	.48											.12								.32			3.02
Monticello‖	Ocmulgee				.20	.05		.03	2.90	.46																			.40			4.04
Morgan	Flint		1.20	.07				.75	.95																				1.12			4.09
Newnan‖	Chattahoochee					.05		.50	.40																				.47			1.42
Norcross‖	...do					.56	.14	.32	1.22	.98																			.32			3.54
Point Peter	Savannah							2.75	.45											.15								.10				3.45
Poulan	Suwanee		.21	.02				.84	2.23											.39									.49			4.18
Putnam	Flint		.25					.70																				.60				1.55
Quitman‖	Suwanee			.38					.68	1.27										.49	.12								.73			3.69
Ramsey	Coosa							.36	.35													.05	.10					.60				1.46
Resaca‖	...do							.70	.08		.30																	.80				1.88
Rome‖	...do					T.		.90	.22	.36																			.50	T.		1.98
St. George‖	St. Marys			.02	.20	.03	.08	.60	.50	.40	T.					.15	.70	T.	.15	4.05	.13	.12						T.				7.13
St. Marys	...do																															
Savannah	Savannah						T.	.61	1.09					.01	.33	.01		T.	.71	1.88								T.	.01			4.65
Statesboro‖	Ogeechee					T.	.24	1.38	2.15	T.					.15				1.48	.53									T.			5.93
Talbotton	Chattahoochee							.08	.78																			.40	.03			1.29
Tallapoosa‖	Coosa					.10		.97	.44	1.55																			.50			3.56
Thomasville	Ocklockonee			93	2.38	.01	T.	.38	.44										T.	.15								.57	.23			5.09
Toccoa‖	Savannah							.11	.55	.19																			.37			1.22

TABLE 2.—*Daily precipitation for October, 1910. District No. 2*—Continued.

Stations.	River basins.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Georgia—Cont'd.																																	
Valdosta	Suwanee				T.				1.02	1.00										.80	T.												2.82
Valona	Ogeechee			T.	T.		.40	2.00						1.68		T.				4.85												.03	8.96
Washington	Savannah					1.12	.08	2.15	.67											.94	.32							T.					5.28
Waycross	Satilla	.82			.75	1.32	.02	.60	1.04	.70	.02					.52	.02			2.15	.17							.20					8.33
Waynesboro	Savannah						.10	.10	3.10	.10										.30	.10												3.80
West Point	Chattahoochee				.02	T.		.01	.88	.18																		.53					1.62
Woodbury	Flint					.25			.87																			.68					1.80
Florida.																																	
Apalachicola	Coast			.05	.78		.06		2.32																								3.21
Arcadia	Peace Creek	.31	.02	.49	.15	.04	.01	1.62	.50	.40	.50	.10	T.	.03	.24	1.45	1.55	.73	4.75	.22	T.							.06					13.16
Archer	Waccasassa							1.73	.65							.05			1.61										.40				4.44
Avon Park	Kissimmee	T.	.27	1.01	.40	T.	.01	.37	.53	T.	.05			.33	T.	.98	1.81	.43	5.60	.52									T.		.18			12.49
Bartow	Peace Creek	1.20	.04	.11	.31	.14	.02	.03	.46	.30	.62	.19		.10	.02	.09	2.58	.49	5.47	.31	T.													12.55
Blountstown	Apalachicola																																
Bonifay	Choctawhatchee	.86		T.	1.30	.30	T.	1.17							T.													.50					4.23
Brooksville	Withlacoochee			.60	.08			.32	1.04			.56				.15		.11	2.65	.84													6.35
Carrabelle	Coast							1.65	1.70	.10																			.25				3.70
Cedar Keys	do			.04		.28		.25			.05					.05			.22	1.20								.60					2.69
Clermont	Lake			1.40			.28		.20							1.50		6.00	4.20														13.56
De Funiak Springs	Choctawhatchee																																
De Land	St. Johns	T.	T.	.43	.65	.18	.21	.18	T.	.05	.04	.40	.01	T.		1.32	.96	.33	7.77	1.74									.01			T.	14.28
Eustis	Lake			.63	.15		.38	.22	.04	.44				.50		•	.53	•	•	7.25													10.14
Federal Point	St. Johns			1.14	.39	.08	.00	.27		.06				1.36	T.	.08	.58	.58	3.95	3.02									.39				11.99
Fenholloway	Fenholloway																																
Fernandina	Coast			.24	.11	.08		.10	.04	.08		.14				.05	.08		.02	3.23	1.05	.04											5.26
Fort Meade	Peace Creek		1.60	.34	.12	T.		.36	.22		1.26	.04	.01	.07	T.	.53	2.80	.30	5.85	.10									T.				13.60
Fort Myers	Caloosahatchee				.73	.23	.20	.50	.72	T.	.20	.53		T.	1.93	.23	.63	5.65	1.50										.21				13.26
Fort Pierce	Indian		.34		.22	.40	1.21			.23	.15	1.18		.72	.90	2.00	.65	.85	2.94	.66									T.			.34	12.79
Gainesville	Lake	T.				.02	T.		1.34	.36					.12	.05	.06	.35	.04	3.87	.24								.22	.03			6.70
Grasmere	do		T.	.08	.04	T.	.18	.40			.09		.05			.17	.51	.15	6.30	.60									.01				8.58
Hilliard	Nassau			.46	.35	.25	T.	.62	.10	.50					.10	.23	.70	T.	3.40	1.10													7.81
Homestead	Coast	.33	.22	.48		2.10	2.62	.26	.03	.18			.49	.98	1.55	2.52	2.04	1.02	.10					.04					.06	.05		.05	15.12
Huntington	St. Johns																																
Hypoluxo	Lake	.13	.07	1.00	2.51	.42	.55	.17				.36	.02	.85	2.09	9.70	7.09	2.30	.43	.02										.10			27.81
Inverness	Withlacoochee			.32				.17	.08	.25						.40			2.10														3.32
Jacksonville	St. Johns		T.	.23	.17	T.		.31	.54	.06				.37	.28	.20	.36	.23	4.41	.80								.06					8.02
Jasper	Suwanee																																
Johnstown	do			.03	.02		.12	.33	.10	.79					.24			.23	3.96	.11								.16					6.09
Jupiter	Coast			1.70	.86	.06	.91	.41	.20	.13	.75	.16	.83	.09	1.11	4.67	5.86	2.58	.05									.20		.04	.41	20.88
Key West	do	.34	T.		.26	.26	1.01	.08	.55	.05			.29	.50	2.75	.57	.06	4.08							T.				.15				10.95
Kissimmee	Kissimmee		T.	.15	.86		.10	T.	.18	T.	.21					.57	4.65	.38	4.10	.30									.15				11.65
Lake City	Suwanee	.10				T.		.11	.60	.45	.03					.11			.20	1.30	.06								.35				2.96
Live Oak	do								.20	1.90	.15									1.70	.05								.75				4.75
Macclenny	St. Marys			.36	.05			.90		2.00									1.60	.80													5.71
Madison	Suwanee				.15	.13			.43	.20	T.					.09				1.53	.02								1.14				4.41
Malabar	Indian		.15	1.00	1.50	.10		.20	.12	.12	.05	.63	.06	.20	.25	1.16	2.85	1.25	2.75										.23				12.62
Manatee	Manatee		.10	.70	1.30			.15	.70		.10			1.33		.10	.40	1.70	.60										.05				7.23
Marianna	Apalachicola					.09		.08	.29	.21																			1.48				2.15
Merritts Island	Indian	.14	.41		.18	.09	1.15	.75	.17	.48	.06	1.63		.21	1.14	.61	1.92	.52	4.16	.07									.14		T.	T.	13.84
Miami	Coast	1.05	.05	T.	1.05	1.05	1.85	2.80						.85	5.00	2.00	2.25	3.50											T.				21.45
Miami (Subtrop. Gar.)	do																																
Middleburg	St. Johns				.20		.10	.70		*	1.10				.40			.20	*	4.80													7.50
Molino	Escambia				1.35	.62																						.65					2.62
Monticello	Aucilla																																
Mount Pleasant	Apalachicola			1.00	.03		T.	.19	.50																				1.15				2.87
Newport	St. Marks			.70					1.84						.51				T.									1.20					4.25
New Smyrna	Coast			.25	1.00	.04	.12	.45		.09				.71		.30	2.60	.16	1.46	3.52	.30												11.00
Ocala	St. Johns	.05			.06					.30							.42	*	3.92										.23				4.98
Orange City	do				.05	T.	.28	.19		T.	1.54		.30			.64	.48	.62	5.66	1.21													10.97
Orlando	do		T.	T.	T.	.02	.03	.30	.12	.03	.67	.08	.04	T.	T.	.03	1.61	.13	8.02	.62									.03			T.	11.73
Pensacola	Coast			1.47	.98	.27	.20	T.	T.	.63																		.39					3.94
Plant City	Hillsboro																																
Rockledge	Indian		.24	.72	.75	.14	.98		.10	.07	.93	.76	.31	.25		.66	.23	.26	3.76	.08											T.		10.24
Rockwell	Withlacoochee					20	T.	.15	T.									T.	1.75	1.00									T.				3.10
St. Andrew	Coast				.88			.75	.42	.30	.01	.03			.47	.01												.12	.72				3.71
St. Augustine	do			2.15	.52			.63	T.	.10				1.13	.22	.48	.48	.03	5.00	.20									.20				11.14
Sand Key	do																																
St. Leo	Withlacoochee		.12	.72	.15	.09		.40	2.43		.17		.02	.04		.09	1.06	.17	3.54	.60									.06				9.66
Satsuma Heights	St. Johns			.44	.11	T.	.23	.40	.04	.13				T.	T.	T.	.56	.18	5.47	5.27									.44				13.31
Switzerland	do	.49		.06	.09		.64	.41	.03	.10	.04	.06	.07	.04		.04	.45		6.03	.30	.01	.32											9.18
Tallahassee	Ocklocknee				.30			T.	.35	T.																			1.90				2.55
Tampa	Coast			.14	.42	T.		.47	.02	.15	.01	T.	.06	T.		1.13	.49	.23	1.59	T.									.46				5.17
Tarpon Springs	do			.46	1.34		.04	.46	.08	.06			.91			.25	1.08	.12	.69	.37									T.				5.86
Titusville	Indian		.02	.09	1.05	.05	.11		.63	.05	.57	.01	.01	.04		.47	1.41	.60	2.70	.06				.05					.07				7.99
Wausau	Choctawhatchee																																
Alabama.																																	
Alaga	Chattahoochee				.42	T.		T.	1.38	T.																			.80				2.66
Anniston	Coosa				.03	.02	1.41	.50	1.30																			.50					3.76
Ashville	do			T.	T.	T.	.35	.90	.02	T.															T.				.52				1.79
Auburn	Tallapoosa			T.	T.		T.	.53	1.00																			.43					1.99
Benton	Alabama					.12		.10		2.10	19				.21													1.08					3.86
Bermuda	Escambia			T.	T.	.10		.08	.15																			.72					1.05
Birmingham	Black Warrior				T.	T	1.42	.20	.04					.24	T.													.43					2.42
Calera	Coosa							1.60	.05	.50				.97	.02														.65				3.79
Camp Hill	Tallapoosa						.10		1.20																				.57				1.87
Cedar Bluff	Coosa						.40	.80	.20																			.80					2.20
Citronelle	Alabama		.02	.21	.32	.93	1.50	2.06	.03	.03	.02	.05	.01															.54					5.74
Clanton	Coosa					.02	.03	.92	.41	1.35				.67															.60					4.00
Cochrane	Tombigbee																																
Cordova	Black Warrior						3.10		.08					1.45														.52					5.15
Cullman	do					T.	1.29	.23	.03					1.40	.21													.61	T.				3.80
Dadeville	Tallapoosa				.90			.80	.50																				.75				2.95
Daphne	Coast		.25	1.00	.05	.45	1.45	.52	.05	T.		T.		T.														1.05					4.83
Demopolis	Tombigbee					.06	.80	2.40		.16																			.70					4.12
Eufaula	Chattahoochee				.02		T.	.02	.44	.64																			.44					1.56
Evergreen	Escambia						.08	.12	.10																								0.30
Flomaton	do			T.	.23	.30	.12	.08	.03																			.43					.19
Fort Deposit	do				.80	.30		.60	.20	.28																			.35				2.53
Gadsden	Coosa					T.	T.	2.00	.60	.04																			.26				2.54
Goodwater	do				.05			1.60	.15	.40																			.40				2.60
Greensboro	Black Warrior						.13	2.20	T.	.48																			.45				3.26
Greenville	Escambia					.32	.31	.44		.32																			.51				1.92
Hamilton	Tombigbee				.05			.07						1.22	.51													.81					2.66
Highland Home	Escambia			.61	.29	.51	1.88	.20																				.40					3.89

TABLE 2.—*Daily precipitation for October, 1910. District No. 2*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Alabama—Cont'd.																																	
Livingston‖	Tombigbee				.12	.33	.35	1.43																					.40				2.53
Lock No. 4	Coosa				.25		1.25	.90	.30	.05																		.48					3.23
Lucy	Chattahoochee																																
Maple Grove	Coosa				T.	T.	T.	1.50	.20	.05													T.					T.	.49	T.			2.24
Mentone‖	do					T.		1.92	.50	.35						.28													.70	T.			3.75
Milstead‖	Tallapoosa				.30		.50		1.04																					.44			2.28
Mobile	Coast		.06	1.48	T.	.01	4.11	.41	.05			.02																1.33					7.45
Montgomery	Alabama			.01	.02	.01	.37	.30	.02						T.													.68					1.41
Newbern	Black Warrior		T.	.01	T.	T.	2.53	T.	.66																			.57					3.77
Oneonta	do				T.		1.35	.70	.06	.02				.30														.55					2.98
Opelika‖	Tallapoosa				T.	T.		.20	.92	.16																				.50			1.78
Ozark‖	Coast				1.40	.20		.75	.65	1.20																				.80			5.00
Prattville	Alabama																																
Pushmataha‖	Tombigbee				.42	.37	.14	.36	.03	.20				.02															.30				3.14
Selma‖	Alabama			.02	.04		.46	1.30	.20	.30																			.60				2.92
Spring Hill	Coast		.02	.71	1.01	T.	5.18	2.12	.20	.07	.21	1.																.21					9.73
Talladega	Coosa																																
Tallassee‖	Tallapoosa				T.			1.13	1.00	.08																			.39				2.63
Thomasville‖	Tombigbee				.17		.06	2.84	.17	.31																							3.55
Troy	Escambia			.01	.11	.02	.04	.46	.35																			.65					1.64
Tuscaloosa‖	Black Warrior				.03	T.	.15	2.55		.04					.08	.29												.08	.35				3.57
Tuskegee	Tallapoosa							.99	.72																			.40	T.				2.11
Union Springs‖	do				.08			.87	.85	.11																			.80				2.71
Uniontown	Black Warrior		.09	T.	T.		1.18	1.33	.72	.08				.06	.09							T.						.09					4.24
Valley Head	Coosa				T.		1.85	.35	.28						.20							T.						.70	T.				3.38
Wetumpka‖	do							1.38	.25																				.66				2.29
Mississippi.																																	
Aberdeen‖	Tombigbee					T.	.85	.80							1.04	.27												.15	.39				3.23
Agricultural College	do				T.	T.	1.50	T.	T.	T.			.08	.05	.25							T.						.88					2.76
Bay St. Louis	Coast		.85	.33	.35	.06	.93	.24		T.	.05		.10															.48					3.39
Biloxi	do			2.10	.18	.03	.92	.75	T.	.18	T.	1.05																.83					6.04
Booneville	Tombigbee			.08	.05		1.56							.69								28						.66					3.32
Brookhaven‖	Pearl			.37	.02	.10	.09	1.76		.03	T.		.17	.09	T.								.04							T.			2.67
Columbia‖	do			.36	.20	.02	.16	1.96					.58	.04																			3.32
Columbus‖	Tombigbee	T.				.31	.40	.60		T.					1.75													T.	.48				3.54
Crystal Springs‖	Pearl			.17	.18	.08		2.35					.05	1.43	.61																		4.87
Edinburg	do	T.	T.	T.		.19	1.24	.02	T.				T.	1.45	.05							.02						.34					3.31
Enterprise‖	Chickasawhay			.08		.05	.08	.91						.14		.04													.47				1.77
Fulton‖	Tombigbee					.04	1.08	.60							.34	.01							.16					.40	.08				2.71
Hattiesburg‖	Leaf			.06	T.		1.92																										1.98
Hazlehurst‖	Pearl			.20	.11	.13	.20	1.90		.01			.84	2.05	.01																		5.45
Hickory‖	Chickasawhay					T.	2.26																					.50					2.76
Jackson	Pearl		.11		T.	T.	1.44		T.			T.	.42	.33														.28					2.58
Lake‖	do			.30	T.	T.	T.	1.00					1.20	.20	.18													.45					3.28
Lake Como	Leaf																																
Laurel	do		.92	.02	.40	.08	1.48	.04	T.	.02			T.	.08								T.	T.					.50					3.61
Leakesville‖	Chickasawhay			.27	.12			2.87	.03																				.25				3.54
Louisville	Pearl					.06	2.14							.11														.51					2.82
McNeill	do	.05	.57	.30	.06	1.23	1.62	.05	T.			.07	.02	T.														.20					4.17
Macon‖	Tombigbee				T.	.14	.50	1.13	T.					.24	.10	.10													.62				2.83
Magnolia	Pearl		.13	T.	T.	.23	1.69			T.		.05		.04	.01							T.						.01					2.19
Meridian	Chickasawhay	.04	.06	.12	.64	.29	1.27		.03				.10	T.														.25					2.80
Merrill‖	Pascagoula			.32	.24	.50	.10	1.50	.28			.24																	.10				3.28
Monticello	Pearl		.50		T.	.26	1.80	.02	T.			T.	.22	.63		.02												.15	T.				4.59
Okolona‖	Tombigbee						.85	.75															.15					.28	.15				2.18
Pascagoula	Coast			1.13	.20		1.76	1 92	.02				.08		.01													.50	.20				5 82
Pearlington	Pearl		.66		.31	.27	.61	.20			T.	T.	1.72	.11														T.					3.88
Porterville	Tombigbee			.37	.08	T.	1.20	T.	T.	.10			.42															.30					2.47
Shubuta‖	Chickasawhay		.22	.16	.06		.04	1.24	.02					.36															.48				2.58
Waynesboro‖	do			T.	.10	.28	.18	1.60		.10				.40															.30				2.96
Woodland	Tombigbee					.77	1.65							.82								.11						.60					3.95
Louisiana.																																	
Pearl River‖	Pearl			.50	.04	.50	.42	.96	T	T.			.14																.48				3.04

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 2, South Atlantic and east Gulf States.*

Date.	Virginia.								North Carolina.																		Charleston, S. C.	
	Lynchburg.		Norfolk.		Richmond.		Saxe.		Charlotte.		Edenton.		Fayetteville.		Hatteras.		Newbern.‡‡		Raleigh.		Reidsville.		Salisbury.		Wilmington.			
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	86	60	82	58	86	60	88	62	85	61	83	55	89	59	80	66	87	58	84	59	87	61	87	60	84	63	83	69
2...	83	57	74	60	78	54	84	61	91	67	80	63	91	63	80	68	85	61	85	66	87	63	92	64	88	68	86	70
3...	68	51	74	60	74	50	85	60	77	64	75	53	84	62	77	66	79	58	72	62	73	57	90	65	79	65	82	73
4...	80	60	81	65	83	57	88	62	84	51	83	56	90	59	82	73	84	58	82	58	81	56	83	54	82	63	83	74
5...	82	57	83	67	86	62	88	63	84	69	84	62	90	61	82	73	86	54	85	61	84	63	87	67	82	66	81	74
6...	84	59	86	67	87	64	89	50	84	67	75	65	90	65	83	73	89	64	86	66	87	66	87	67	84	71	84	75
7...	71	55	85	61	72	53	78	56	79	55	85	65	88	59	83	71	90	66	84	56	70	54	85	60	85	64	84	72
8...	55	50	87	60	56	52	58	51	55	52	85	54	60	57	82	71	77	61	58	54	54	50	76	51	72	64	79	70
9...	76	51	70	59	73	53	78	52	79	53	80	55	77	54	75	65	72	58	75	54	71	51	80	53	75	61	79	66
10...	69	47	63	53	66	46	68	43	71	53	75	42	71	51	68	59	71	50	67	51	71	46	86	47	69	54	76	65
11...	79	43	74	49	78	45	75	38	74	52	78	60	79	46	71	56	77	44	75	50	79	46	78	44	76	53	77	60
12...	83	51	81	54	81	51	88	50	82	55	80	65	85	53	78	65	85	45	82	56	88	52	84	50	81	58	79	32
13...	64	48	66	55	66	47	74	48	68	57	79	65	77	57	74	66	78	53	71	56	71	51	72	54	78	60	79	65
14...	79	53	90	62	78	57	80	48	78	57	79	62	82	60	82	70	84	56	78	60	81	55	80	53	80	51	80	69
15...	83	55	79	61	83	58	85	52	81	58	78	54	85	59	80	69	83	57	83	60	84	58	83	54	80	64	82	70
16...	85	56	86	61	86	56	88	50	83	30	72	54	87	59	79	68	82	56	85	63	89	52	84	54	80	62	83	68
17...	73	55	71	60	75	54	76	51	80	33	77	56	88	59	76	68	82	57	78	60	81	60	85	55	83	62	81	67
18...	75	47	75	60	75	48	78	40	72	55	68	50	77	54	78	68	79	55	76	53	76	51	76	50	80	60	79	69
19...	66	58	74	67	75	60	68	58	67	63	72	61	74	65	78	72	77	57	72	33	67	60	81	60	81	70	78	70
20...	81	63	74	67	78	62	75	50	84	66	75	55	84	71	84	71	80	67	81	59	84	65	84	63	80	70	83	70
21...	77	56	70	63	76	60	81	53	82	64	75	69	85	62	73	67	79	59	79	63	82	60	84	57	75	64	79	70
22...	67	48	75	56	66	49	72	60	71	50	78	62	84	64	81	66	86	58	75	53	75	52	76	58	83	63	81	61
23...	62	43	62	47	65	42	74	35	66	44	71	45	71	45	68	58	70	45	65	44	70	41	67	40	68	50	69	55
24...	66	38	66	49	68	41	70	35	69	48	68	38	74	41	70	54	73	41	69	43	72	42	72	40	73	51	73	55
25...	59	45	69	51	70	44	74	40	72	47	72	50	77	48	74	59	76	42	73	48	70	44	73	42	74	55	76	57
26...	67	40	64	49	64	42	69	35	67	44	66	43	74	44	67	55	70	40	67	47	70	39	74	42	69	48	69	57
27...	60	48	75	52	73	48	73	50	72	51	74	50	79	48	76	62	78	42	75	50	70	48	74	43	75	55	77	60
28...	52	37	67	45	53	39	66	41	57	36	70	45	70	45	73	51	62	49	66	38	64	38	72	41	72	42	73	45
29...	44	34	48	40	48	34	52	25	48	31	60	40	53	33	54	44	54	29	48	32	64	29	52	29	51	35	52	39
30...	49	27	48	36	51	31	54	21	51	28	58	28	55	28	53	41	55	26	52	30	54	25	53	23	52	31	52	37
31...	66	29	61	37	62	31	67	28	66	35	60	28	70	28	58	42	64	27	66	36	69	30	69	28	63	34	61	41
Mns	71.0	49.7	71.9	55.8	72.0	50.0	75.5	47.7	73.5	53.7	74.9	53.9	78.7	53.5	74.8	63.1	77.2	51.7	74.0	53.6	75.0	50.7	78.3	50.6	75.9	57.6	76.8	63.1

Date.	South Carolina.														Georgia.													
	Columbia.		Conway.‡‡		Georgetown.		Greenville.‡‡		Newberry.		Society Hill.		Trial.		Adairsville.‡‡		Albany.‡‡		Atlanta.		Augusta.		Dahlonega.		Macon.		Savannah.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	87	62	87	61	85	68	87	59	91	59	84	64	.....	.....	85	60	94	67	86	65	88	64	81	57	88	63	86	66
2...	91	65	92	65	88	68	91	59	94	60	87	67	.....	.....	87	59	92	67	89	72	89	66	86	58	90	62	87	68
3...	86	66	83	65	83	68	79	62	86	62	82	62	.....	.....	85	61	88	66	83	65	86	64	80	60	86	65	82	70
4...	87	65	83	64	82	73	80	65	87	65	82	65	.....	.....	83	66	90	71	80	68	87	70	76	66	85	70	84	74
5...	87	71	86	65	84	69	85	67	87	72	85	66	.....	.....	83	70	91	71	80	67	85	72	77	65	86	70	83	72
6...	85	69	86	68	85	71	87	68	89	69	85	69	.....	.....	86	71	92	73	82	63	84	71	80	67	86	72	85	74
7...	82	61	85	70	83	72	70	69	82	65	83	58	.....	.....	67	56	86	72	75	57	85	63	74	61	81	66	83	72
8...	63	58	73	63	77	65	57	54	65	56	63	55	.....	.....	66	55	84	71	61	56	65	59	65	57	67	60	80	70
9...	79	56	78	60	78	62	78	55	79	55	73	54	.....	.....	77	58	78	65	77	58	81	59	78	59	79	59	77	67
10...	72	58	73	56	79	64	74	55	73	54	68	48	.....	.....	77	54	86	65	75	58	78	61	73	54	79	57	80	65
11...	76	50	79	51	80	66	77	50	77	48	71	48	.....	.....	79	54	86	65	76	57	76	55	74	49	79	60	79	59
12...	81	54	83	52	81	55	81	49	83	52	77	55	.....	.....	81	54	86	62	81	62	81	53	77	53	82	58	82	60
13...	76	57	82	52	80	58	68	59	73	55	71	60	.....	.....	81	55	86	63	79	60	81	59	74	55	81	60	80	64
14...	77	63	82	65	80	59	80	59	77	49	75	60	.....	.....	80	58	86	65	77	58	77	62	75	61	78	62	81	65
15...	82	62	85	63	81	62	81	56	84	59	79	60	.....	.....	81	55	85	66	79	60	83	65	78	55	82	63	80	66
16...	84	59	84	62	80	64	84	57	84	59	80	60	.....	.....	83	58	86	65	84	64	85	62	82	56	83	60	81	64
17...	85	60	86	59	83	64	83	60	84	58	82	56	.....	.....	81	55	87	63	83	63	85	61	80	56	85	60	81	63
18...	78	59	80	60	81	66	75	60	78	56	76	59	.....	.....	84	61	82	66	77	62	80	64	73	62	80	65	77	68
19...	72	67	87	70	78	71	69	61	71	66	74	59	.....	.....	.....	59	78	70	75	65	73	68	78	66	72	67	74	67
20...	85	68	81	72	82	69	84	62	86	65	82	65	.....	.....	84	60	92	62	83	63	85	67	82	61	88	62	86	68
21...	86	65	82	63	81	66	83	60	86	61	80	67	.....	.....	.....	49	91	62	83	58	86	63	80	58	87	58	89	68
22...	76	54	85	68	82	60	75	55	75	57	77	47	.....	.....	68	46	77	61	63	47	72	54	74	47	71	52	78	58
23...	69	44	70	47	68	51	73	39	70	40	66	44	.....	.....	70	37	77	44	68	44	70	44	68	47	72	44	71	50
24...	73	46	72	44	68	51	77	40	74	42	68	48	.....	.....	72	37	81	44	70	48	74	44	70	37	76	41	75	55
25...	77	50	78	50	70	50	83	43	76	44	65	48	.....	.....	.....	39	83	47	73	53	78	47	69	42	79	45	76	56
26...	72	47	73	44	70	52	77	42	72	42	68	51	.....	.....	.....	.....	80	47	73	49	72	48	75	40	76	44	71	54
27...	78	53	80	48	78	53	67	44	78	49	75	51	.....	.....	.....	.....	86	49	70	45	79	52	66	45	78	48	80	61
28...	64	43	64	48	70	48	63	39	66	44	57	34	.....	.....	.....	.....	58	46	45	31	65	40	58	35	52	38	68	44
29...	51	33	52	34	53	37	52	29	53	31	51	30	.....	.....	51	36	53	32	44	30	51	34	41	30	50	34	54	35
30...	53	29	54	31	53	32	62	25	53	25	51	30	.....	.....	.....	32	56	33	52	31	55	29	49	21	55	28	54	34
31...	66	32	66	30	61	33	76	29	67	29	61	33	.....	.....	.....	.....	.....	33	64	38	65	31	67	27	65	30	62	37
Mns	76.8	55.7	78.4	56.5	76.9	59.9	76.1	52.6	77.4	53.2	73.5	54.0	.....	.....	77.9[b]	53.9[d]	82.6[a]	59.1	73.5	55.4	77.5	56.5	73.0	51.8	77.4	55.6	77.6	61.1

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 2*—Continued.

Date.	Georgia.						Florida.																			
	Thomasville.		Waycross.‡‡		West Point.‡‡		Avon Park.		Fort Meyers.		Gainesville.‡‡		Jacksonville.		Jupiter.		Key West.		Miami.		Orlando.		Pensacola.		Tallahassee.‡‡		Tampa.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	89	65	89	69	90	64	88	71	85	70	89	69	84	70	85	74	86	73	88	73	87	70	85	73	89	68	88	71
2...	90	63	90	64	93	62	89	71	85	72	91	71	85	68	86	73	85	77	85	74	85	71	82	74	88	67	89	72
3...	85	69	85	67	87	63	87	70	82	73	89	72	84	72	82	71	87	79	88	74	85	71	82	69	85	70	82	71
4...	88	70	86	69	84	67	89	70	84	74	90	71	85	72	82	72	87	73	86	72	85	72	84	72	85	70	88	71
5...	89	70	89	69	83	71	89	71	84	71	90	70	85	74	84	72	81	71	87	70	88	72	83	74	85	71	87	71
6...	88	70	88	69	85	70	84	73	81	70	91	72	86	75	81	70	79	70	85	63	84	71	83	69	85	71	86	72
7...	85	70	88	69	66	65	85	71	.....	72	91	72	85	71	83	73	85	75	84	70	84	73	72	64	82	71	85	72
8...	82	70	88	70	68	62	91	72	.....	72	87	71	85	70	84	75	85	73	88	76	89	72	82	64	78	71	87	72
9...	82	67	82	72	78	62	91	72	84	72	72	71	84	71	85	74	86	73	88	76	89	71	80	72	81	70	88	72
10...	86	66	87	70	83	53	88	72	84	72	84	46	81	72	86	73	85	76	88	73	85	72	82	71	84	68	88	72
11...	85	65	86	62	81	54	83	73	81	71	85	68	82	66	85	73	85	74	88	72	87	69	81	73	83	67	84	72
12...	85	60	87	58	87	58	90	70	83	71	86	68	84	68	85	74	86	72	88	78	86	72	82	72	83	64	87	71
13...	86	64	87	62	86	59	86	72	83	72	85	68	82	72	83	75	82	72	84	72	87	69	81	71	84	65	88	72
14...	86	69	87	66	80	62	78	63	75	71	84	71	86	71	80	71	79	70	80	69	81	72	84	72	86	69	83	72
15...	84	69	85	67	84	62	75	64	75	68	82	71	83	71	76	71	81	76	80	70	78	73	83	70	83	69	76	70
16...	85	67	86	67	86	57	74	68	77	67	78	71	80	68	76	66	84	79	82	68	76	69	85	71	83	68	73	68
17...	86	62	86	63	87	57	75	69	75	69	83	70	82	70	79	70	79	71	87	70	75	69	86	69	84	66	74	68
18...	79	58	76	69	82	59	76	70	75	69	76	71	78	70	80	74	82	75	84	74	76	71	85	67	79	65	76	66
19...	75	66	73	68	80	64	87	72	80	73	76	69	73	71	85	76	82	75	90	70	82	72	86	67	78	71	83	75
20...	90	65	90	66	91	58	89	72	81	71	86	68	87	70	86	73	84	74	91	71	89	71	84	72	88	66	86	73
21...	87	68	89	66	89	58	88	63	82	69	85	70	87	70	84	70	84	75	88	71	88	65	82	66	85	67	84	68
22...	79	53	74	67	72	49	90	65	84	72	83	68	82	62	83	73	85	76	89	68	87	66	74	54	78	65	85	72
23...	76	44	78	46	77	41	83	59	80	70	76	52	73	54	83	67	83	76	90	70	81	62	75	52	73	50	79	61
24...	80	45	79	45	85	39	84	54	79	62	79	58	79	60	82	65	82	74	85	69	83	58	73	59	77	52	81	59
25...	80	52	80	52	89	42	78	47	79	63	80	59	77	63	81	66	81	74	86	63	81	62	80	90	78	54	77	63
26...	78	46	80	49	89	43	80	52	78	58	78	57	76	58	80	63	78	70	83	59	81	54	77	63	78	56	81	62
27...	84	50	82	50	87	44	83	45	78	64	82	58	79	61	84	68	83	70	88	66	85	55	78	57	81	57	80	60
28...	64	42	62	52	66	39	80	53	79	62	65	59	70	45	86	60	83	72	85	68	80	55	57	42	60	50	75	51
29...	53	33	56	35	60	30	63	47	60	49	54	39	54	39	64	50	72	60	75	56	61	44	54	35	55	34	56	44
30...	57	32	59	33	68	27	66	46	68	47	61	37	56	37	71	52	71	59	75	53	69	44	57	41	56	37	65	43
31...	66	30	68	33	70	29	70	53	72	52	71	43	64	43	75	62	73	63	78	63	71	52	63	44	64	37	70	50
Mns	80.9	59.0	81.4	60.1	81.1	53.9	82.5	64.2	79.1[b]	67.4	80.9	63.8	79.3	64.7	81.5	69.2	82.1	72.5	85.3	69.1	82.1	65.8	78.1	63.8	79.3	62.1	81.0	66.3

Date.	Alabama.																Mississippi.							
	Anniston.		Bermuda.		Birmingham.		Eufaula.‡‡		Mobile.		Montgomery.		Tuscaloosa.‡‡		Uniontown.		Columbus.‡‡		Hattiesburg.‡‡		Jackson.		Meridian.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	88	66	.....	.....	90	69	88	63	89	73	91	68	95	65	90	66	94	62	91	61	92	57	88	64
2	90	62	.....	.....	91	67	87	62	87	72	92	67	93	65	91	66	95	63	92	62	92	61	88	65
3	86	68	88	68	88	69	88	65	85	72	90	70	91	65	89	68	92	65	88	61	90	67	87	67
4	83	70	84	72	83	70	86	66	85	75	84	72	88	70	84	71	83	69	90	71	92	72	85	71
5	81	70	85	71	83	72	85	69	86	75	86	71	88	70	87	69	88	73	88	73	91	75	85	72
6	85	59	85	68	78	56	87	68	80	60	85	66	80	72	78	66	69	64	86	71	76	58	77	56
7	63	57	69	58	63	54	76	65	65	58	67	60	65	54	66	56	64	55	66	58	70	53	62	56
8	65	59	73	61	67	59	76	66	71	62	72	62	72	56	68	60	71	55	68	58	72	55	65	56
9	80	56	79	68	81	62	76	61	81	68	82	64	83	60	78	65	85	59	80	58	78	65	75	63
10	81	50	87	63	84	55	80	57	87	69	84	59	85	54	86	60	85	51	88	60	87	63	82	60
11	78	61	86	61	84	62	79	62	85	69	86	64	88	53	86	60	89	50	91	64	92	59	85	57
12	84	61	88	65	83	67	81	58	85	71	86	55	88	60	87	67	89	51	88	66	85	69	81	67
13	83	62	87	63	84	66	81	58	87	68	86	68	88	65	85	69	87	62	80	66	87	68	85	67
14	80	34	87	65	81	64	81	59	88	72	83	67	85	65	85	66	88	64	90	65	89	64	84	64
15	82	57	85	64	83	64	81	62	84	68	83	63	86	63	83	64	85	64	88	66	87	67	82	64
16	84	56	86	62	84	62	83	59	86	68	85	61	86	62	85	64	87	60	86	60	87	64	84	62
17	85	55	88	58	86	60	84	56	88	67	87	61	87	60	87	62	89	57	88	59	89	58	85	58
18	81	64	85	50	83	65	81	57	85	67	84	64	87	60	83	64	86	57	87	58	87	58	84	59
19	84	58	86	60	84	62	80	62	86	65	84	65	88	59	87	59	87	57	88	56	87	54	83	57
20	84	54	89	60	84	60	87	60	85	68	88	65	90	58	88	62	89	56	86	57	86	57	86	59
21	85	54	84	59	79	52	84	59	82	61	85	59	75	59	78	62	64	56	76	58	67	53	65	50
22	66	42	72	47	65	47	72	50	73	52	70	48	68	44	70	45	69	41	73	44	71	37	67	41
23	70	38	76	38	70	43	72	39	76	48	74	46	70	41	76	44	76	37	84	38	80	38	74	39
24	72	38	78	41	72	44	75	39	75	54	75	46	75	42	.....	.....	79	38	83	44	81	40	76	42
25	77	45	84	49	77	52	79	40	79	58	80	53	80	42	84	52	82	38	84	44	85	47	80	51
26	78	40	83	45	79	46	75	43	82	56	80	51	79	45	82	45	86	42	83	46	85	44	82	47
27	69	43	81	.....	66	46	79	44	79	58	78	52	71	46	73	58	66	42	82	45	73	55	72	50
28	50	34	56	43	50	32	54	41	58	43	53	38	52	38	60	39	51	39	60	42	55	36	51	35
29	47	27	53	31	48	27	50	31	55	36	51	32	52	28	54	28	51	26	56	35	54	27	51	29
30	56	25	60	28	58	30	54	27	61	36	57	31	57	31	59	29	62	26	65	28	67	27	59	28
31	66	28	68	29	68	38	62	27	68	39	65	32	60	32	68	32	70	28	73	29	74	30	67	32
Means	76.2	52.4	79.7[b]	55.6[c]	76.5	55.5	77.5	54.0	79.5	61.5	79.1	57.7	79.1	54.3	79.2[c]	57.3[c]	79.3	51.8	81.5	54.9	81.0	54.1	76.7	54.5

Climatological Data for October, 1910.

DISTRICT No. 3, OHIO VALLEY.

FERDINAND J. WALZ, District Editor.

GENERAL SUMMARY.

Considering the month as a whole, the weather prevailing during October, 1910, was unseasonably warm throughout the Ohio Valley district. The average temperature of the month was decidedly in excess in all sections, and high temperature records were broken at many places early in the month, when maximum temperatures of 90° to 98° were reached. Unusually high temperature prevailed during most of the first and all of the second decade. However, in contrast with this exceptional heat, near the end of the month and lasting for two or three days, there was some of the coldest and most wintry weather, with snow, that has been experienced in a general way over the district in October during the past quarter of a century. A temperature as low as 11° was registered in western North Carolina, 12° in southwestern Virginia, 14° in Tennessee, and 20° as far south as northern Georgia. Killing frost occurred at all places during the month and generally for the first time this autumn. Nearly everywhere its appearance was from one to three weeks later than the average first appearance in past years. In consequence no material damage was done. Precipitation was excessive over the western portion of the district, including western and central Ohio, being extraordinarily great in the lower Ohio River Valley. It was normal or below, but generally sufficient, over the rest of the district.

The most important weather event of the month was the torrential rains which fell over the lower valley, including southern Indiana, and portions of Ohio in the period October 3–6. During about 60 hours rain was practically continuous and amounts ranging from 6 to 15.5 inches were received in that space of time. These rains eclipsed in amount, over most of the area visited, anything of the kind previously experienced in those sections. Enormous damage resulted from the deluge of water. Great areas were flooded, bridges were carried away, and soil, crops, and houses were washed away in the flood. The greatest damage was done in the lower basin of the Wabash River in the southern portions of Indiana and Illinois, and in western Kentucky.

A full account of these rains and the damage done is given at the end of the summary, in a special article which includes also a chart exhibiting the area affected and the amounts of rainfall measured.

TEMPERATURE.

The average temperature of the month over the district, as a whole, was about 3° above normal, the excess ranging between 1° and 6°. In Pennsylvania and in Ohio, except in 1900, and in West Virginia, except in 1897 and 1900, the temperature averaged higher than for any other October during the past 20 to 25 years. Similar conditions also prevailed over other portions of the district.

The month opened unusually warm, the very warm weather continuing during four or five days, when some of the highest temperatures ever recorded so late in the year were registered in various parts of the territory under discussion. During this time the average daily temperatures were from 5° to 16° above normal, while maximum temperatures of 90° to 98° were registered in the various sections of the district, except that in western New York, western Maryland, West Virginia, and northern Georgia they were not over 85°. The records of high temperature for October were broken in Illinois and at many stations located in other States of the district. In several of the States the maximum temperature recorded in this period has been exceeded only once or twice in October during the past quarter of a century. Following this unusual heat a cool wave, with temperatures somewhat below normal, obtained for a few days. But beginning about the 11th, another period of unusually warm weather set in and continued during the entire second decade, when average daily temperatures were again from 5° to 16° above normal, but the maximum temperatures, as a rule, were not quite so high as earlier in the month.

During the third decade conditions were decidedly more varied. First there was a brief cool spell with temperatures slightly below normal, then followed two or three days with temperature somewhat above normal, when finally there occurred, in the period 28–30th, the spell of intense wintry weather mentioned in the first paragraph. During these three days the daily temperature averaged from 8° to 25° below normal. Low temperature records for October were broken in many of the States, notably in Virginia, North Carolina, Georgia, Alabama, and Tennessee, while in Kentucky there occurred the second lowest temperature ever recorded in October in that State. The following remarkably low temperatures were registered the morning of the 30th: Banners Elk, N. C., 11°; Marion, Va., 12°; Mountain City, Tenn., 14°; Beattyville, Ky., 17°; Diamond, Ga., 20°; Deer Park, Md., 15°; and Riverton, Ala., 21°. There were also unusually low temperatures reported from other States, namely, 13° in New York, 14° in Pennsylvania, 15° in West Virginia and Indiana, 18° in Ohio, and 20° in Illinois. A most remarkable range in temperature for October is worthy of note. At Riverton, Ala., on the 1st the temperature registered 98°, while at Banners Elk, N. C., on the 30th it was 11°, a range of 87°. A singular feature of this great range is the fact that both the high and the low temperatures occurred in the southern portion of the district.

While light frost occurred in some of the mountain sections and other places in the northern portion of the district in September, yet the first general frosts of the season of consequence occurred during October. In Pennsylvania frost was general on the 13th, being killing in northern counties and the mountain districts. In Maryland the first killing frost occurred on the 8th, and in West Virginia on the 20th. In Ohio frosts were general on the 8th, freezing temperatures occurred in places in the Muskingum Valley on the 23d, and killing fosts were general in the southeastern portion on the 24th. In North Carolina the first killing frost occurred on the 23d. In other parts of the district the first killing frost, of any extent, attended the cold wave of the 28–30th. The appearance of killing frost this autumn was from one to three weeks later than the average date of past years in the different parts of the district, and from one month to six weeks later than the earliest record of this phenomenon. On account of the lateness of its occurrence the frost did little or no damage in any locality, while the extension of the growing season was beneficial.

PRECIPITATION.

Precipitation during the month was below normal in New York, Pennsylvania, except in the extreme northwestern portion, Maryland, West Virginia, the portions of Virginia and North Carolina in this district, over the southeastern portion of Ohio, in the Bluegrass and eastern portions of Kentucky, and in eastern Tennessee. Over these sections the monthly amount was generally between 1.5 and 2.5 inches; elsewhere in the district it was above normal, the excess increasing toward the lower Ohio River from all directions. Over the central and southern portions of Indiana and Illinois, central and southwestern Ohio, western Kentucky, and northwestern Tennessee, there was a decided excess. In these sections there occurred early in the month some of the heaviest, if not the heaviest,

rains that have ever fallen in this part of the country. These excessive rains raised the aggregate amount of precipitation for the month to two or three times the normal amount for October. 15.5 inches occurred at Golconda, Ill., between 12 and 13.5 inches at several other stations in southern Illinois, and 10 inches or more at stations in southwestern Indiana, and extreme western Kentucky. Over the rest of the territory where the precipitation was in excess, the amounts ranged between 4 and 10 inches.

Rain was quite general over the district in the period, 4th to 7th, being extraordinarily heavy in the lower Ohio Valley, as before mentioned. Between 6 and 15 inches of rain fell over the southern portions of Indiana and Illinois, over western Kentucky, and southwestern Ohio within 60 hours, and 24-hour amounts of 3 to 8 inches were common. Moderate rains were quite general in the period 21st–22d and snow in the period 27–29th. There were light to moderate rains in Kentucky, Tennessee, and Alabama in the period 13–15th, and in North Carolina and Virginia 17–20th, but over the rest of the district there was practically no precipitation from the 9th to the 20th, inclusive. From the 22d to the 30th, inclusive, precipitation occurred substantially every day in the extreme northeastern portion of the district, where, in fact, two-thirds of the monthly amount was received during the last decade.

A snowstorm, which extended to the most southern portion, swept over the district during the 28–30th. The snowfall which attended this storm was extremely unusual in amount for the season in nearly all parts of the district, but particularly in the southern portion. In Alabama, Georgia, and Tennessee was experienced the first snow ever reported in the month of October other than light flurries, and even flurries have occurred in Georgia and Alabama in only one other October of which there is a record. The snowfall for the other States composing the district was as follows: New York, 3 to 7.8 inches; western Pennsylvania, trace to 7 inches (the heaviest in October with one exception in 23 years); Ohio, trace to 1.5 inch; western Maryland, 1 inch; southwestern Virginia and western North Carolina, trace to 4 inches; Tennessee, Kentucky, and Illinois, trace to 1 inch; and Indiana, trace to 7 inches.

MISCELLANEOUS.

During an electric storm which passed over Montgomery County, Ky., during the night of the 1st–2d, a barn filled with tobacco, hay, and farming implements was struck by lightning and destroyed with its contents. Lightning also struck a residence in the same locality, doing some minor damage. Electric wires over the county were badly damaged, and many trees shattered.

On the 13th a severe rain and thunderstorm broke over the fair grounds at Owensboro, Ky., while the Daviess County fair was being held, doing considerable damage and causing a panic among the people attending.

A severe thunderstorm passed over the central portion of Ohio on the 16th, doing considerable damage. A woman was killed by lightning in Muskingum County; five barns were struck, four of them being destroyed, by lightning in Knox County; and hail did considerable local damage in Marion County.

THE HEAVY RAINFALL OF OCTOBER 3–6.

The remarkably heavy rains which fell over the central Mississippi and Ohio valleys October 3–6 were caused by a general distribution of pressure and general atmospheric conditions which are usually productive of heavy rains in those sections. An area of high pressure overspread the Appalachian Mountain region and Atlantic States, while a barometric depression slowly advanced across the Mississippi Valley, being retarded in its movement by the persistence of the high pressure area to the eastward. Warm, moist currents of air were therefore drawn into the central valleys from the Atlantic Ocean and the Gulf of Mexico.

On the morning of the 3d this high area overspread practically the entire country east of the Mississippi River, the barometer gradually increasing from 30.0 inches near the Mississippi River to 30.5 inches on the north Atlantic coast, while a barometric depression occupied the sections immediately west of the Mississippi River, extending from Manitoba to the Mexican border, with a secondary center in north-central Texas. On the morning of the 4th pressure continued high over the eastern districts, while another disturbance of decided energy was moving down over the eastern Rocky Mountain slope. This disturbance in a manner merged with the Mississippi Valley disturbance during the 4th, although the southwestern center continued to assert itself. During the 5th this general depression, narrowing considerably, moved slowly across the Mississippi Valley, while another high pressure area, with considerably lower temperatures, pushed eastward rapidly from the Rocky Mountain region to the Missouri Valley, the high pressure area continuing over the Appalachian Mountain region and Atlantic States, although slightly decreasing in force.

A chart herewith exhibits the amount and distribution of the rainfall over the area affected in District No. 3, and the following extracts from the summaries of section directors in the several States give in a general way an account of the rains and resulting damage:

Kentucky.—Beginning during the night of the 3d and continuing until the 6th, there fell over western Kentucky and over the counties along the Ohio River as far up as Campbell, the greatest amount of rain that has probably ever fallen over so large an area in so short a time in the history of the State. Rain fell in torrents almost continuously for from 48 to 60 hours, during which time amounts ranging between 4 and 10 inches were received at the various stations located in those sections. At Blandville, Ballard County, 10.1 inches fell within 60 hours, which the local observer states is the largest amount recorded in that locality within that time during the past 40 years. Twenty-four-hour records were broken at many stations, amounts ranging between 4 and 5.5 inches occurring at many of them in that period of time. At Louisville 5.06 inches of rain fell in 24 hours, the second largest amount ever recorded in that city within a similar period of time.

Immense damage was done by the deluge of water. Streams overflowed; bottom lands were flooded; tobacco, corn, and other crops washed away, and live stock endangered; county roads and railroads were washed out; and bridges by the hundreds were swept away, including several large railroad bridges. Traffic on several of the railroads traversing that section of the State was temporarily suspended. The loss from bridges destroyed, or injured, alone is estimated to be nearly $1,000,000. Twenty-five bridges were swept away in Henderson County alone, and a number nearly as great in each of a score or more other counties. Over much of this section many bridges had been destroyed by the big flood in July last and had just been replaced when they were again swept away, together with many more that had withstood the previous flood. The total loss from the floods in the State will easily amount to between $1,500,000 and $2,000,000.—*F. J. Walz, District Forecaster, Louisville.*

Indiana.—A storm which eclipsed all previous records of heavy rainfall in Indiana began on the night of the 3d and continued until the 6th. Heavy rain fell during the greater part of the time, with but few intermissions, particularly in the southern part of the State, where 24-hour rainfalls of 3, 4, and in some cases 5 inches were recorded. This unprecedented rainfall swelled the streams in that district to flood stage, inundated the bottom lands, destroyed crops, washed away bridges, caused some loss of live stock, and forced a considerable number of people to abandon their homes for the time being.

At Rockport the Southern Railroad was under water in many places during the flood period, and some damage was done by the accumulation of débris on the tracks. At Petersburg trains were delayed, and in some instances schedules were canceled. Crops were reported to have suffered heavily in that section. A loss of $5,000 was sustained at Bedford by damage to the dam of the Bedford Power Company. The American Drain Tile Company at Terre Haute suffered a loss estimated at $50,000 by the flooding of their plant, and consequent damage to machinery and product of the kilns. The injury to crops was heaviest along the lower valleys of the White, Wabash, and Patoka rivers, where the levees were washed away in many places, and the corn and other crops were partially or wholly submerged. In the remainder of the southern half of the State the rainfall was heavy and streams overflowed, causing some damage, mostly of a minor character. While no accurate estimate can be given as to the total loss occasioned by the flood in the State of Indiana, it is probable that $1,000,000 would not cover the damage from that cause.

The Ohio River at Evansville rose from a stage of 4.7 feet at 7 a. m. on the 4th to a crest of 26 feet at noon of the 9th. The flood stage at that place is 35 feet.—*Verne H. Church, Section Director, Indianapolis.*

Illinois.—The excessive rainfall of the 3d–6th was confined to the counties bordering on the Wabash and Ohio rivers. At Golconda, in Pope County, 15.24 inches fell in 60 hours, nearly 8 inches falling in 24 hours. The correspondent at that place writes:

"Regarding the torrential rains in this section the first part of October, would say that the record was broken in the amount and in the damage done. The east side of the county is hilly, and precipitation runs off very fast. Lusk Creek rises in the northeast part of the county, thence running a tortuous course, empties into the Ohio River just above (north of) Golconda. It drains about one-third of the county. The water rises very quickly, and runs out in the same way. During this flood it rose 10 feet higher than ever known before by the oldest inhabitant. The flood washed away all crops in the creek bottoms, making a clean sweep. A creek called the Big Bay, with its tributaries, drains the west side of the county, which, south of Glendale, is low and level. This section was inundated, and remained under water for nearly a week. A conservative estimate of the loss in corn alone is $20,000. During this period railroad trains could not go beyond Brownfield, so we were without mail for four days."

The loss of crops was confined to limited areas, mostly in bottom lands, but the total damage will probably amount to $100,000. The railroads suffered heavy losses to culverts and bridges.—*Wm. G. Burns, Section Director, Springfield.*

Ohio.—Excessive rains fell in southwestern and west-central Ohio on October 3 to 6. The fall was over 7.5 inches in northern Butler and Warren counties and was over 6 inches at all stations from there northeastward to Delaware County. Most of the rain fell on the 5th and 6th, and at many points it was the greatest ever recorded in October in so short a period.

Much damage was done by flooding in the valley of the Sandusky River, which was 0.5 foot above the flood stages at Tiffin and Fremont on the 7th. Slight damage was done at Fremont, but in the vicinity of Tiffin and above that city the damage to corn standing in shock in the lowlands amounted to thousands of dollars. It is reported that one man lost 60 acres of corn and another 35 acres. Telegrams were sent both these places on the morning of the 6th advising them that the river would reach the flood stage.

The Scioto River was out of its banks to a slight extent to the north of Columbus on the 7th and flooded all the low places along its course in the vicinity of Circleville on the 7th, 8th, and 9th. The river begins to overflow low places at that place at 7.0 feet on the gage and it reached 13.4 feet there on October 8 at 7 p. m. It did not quite reach the flood stage at Chillicothe. Much damage was done to corn, but warning messages sent on the morning of the 6th and again on the 7th enabled residents in the lowlands to drive out their stock and move portable goods.

The Great Miami River did not quite reach the flood stage at Piqua or at Dayton, but it was nearly 3 feet above the flood stage at Hamilton and considerable damage was done in the lowlands between Dayton and Hamilton and in the vicinity of the last-named place.

The Maumee River showed no material rise and none of the streams in the eastern portion of the State were affected to any great extent, the highest water at Zanesville being 11.8 feet on the 8th, or about 18 feet below the flood stage.

The heavy rainfall flooded all low places in Crawford, Wyandot, and Hancock counties.—*J. Warren Smith, Section Director, Columbus.*

WABASH LEVEE PROJECT.

Recent flood losses in the territory adjacent to the lower Wabash and Patoka rivers in southern Indiana have caused a renewal of interest in the project to build a system of levees along those streams. The inhabitants of these valleys are familiar from long experience with spring floods, but a fall flood is a different and more serious matter.

For some years past there has been agitation of the question of building these levees, and the first effort to take a practical step in that direction brought forth a torrent of remonstrances. The matter, however, has been thrashed out in the courts, and a commission has been appointed to investigate the cost of the levees and to apportion the assessments of the landowners who will be benefited. A civil engineer with a corps of assistants is now at work preparing plans for the work. The length of the proposed levee system is about 80 miles and the estimated cost is $250,000, and it will require several years for its completion.

The Wabash River for a long distance constitutes the State line between Indiana and Illinois. In the event of the building of the levee on the Indiana side, similar embankments will have to be built on the Illinois side in self-defense, as the Indiana levee system would deflect the water in times of flood to the low lands in Illinois.

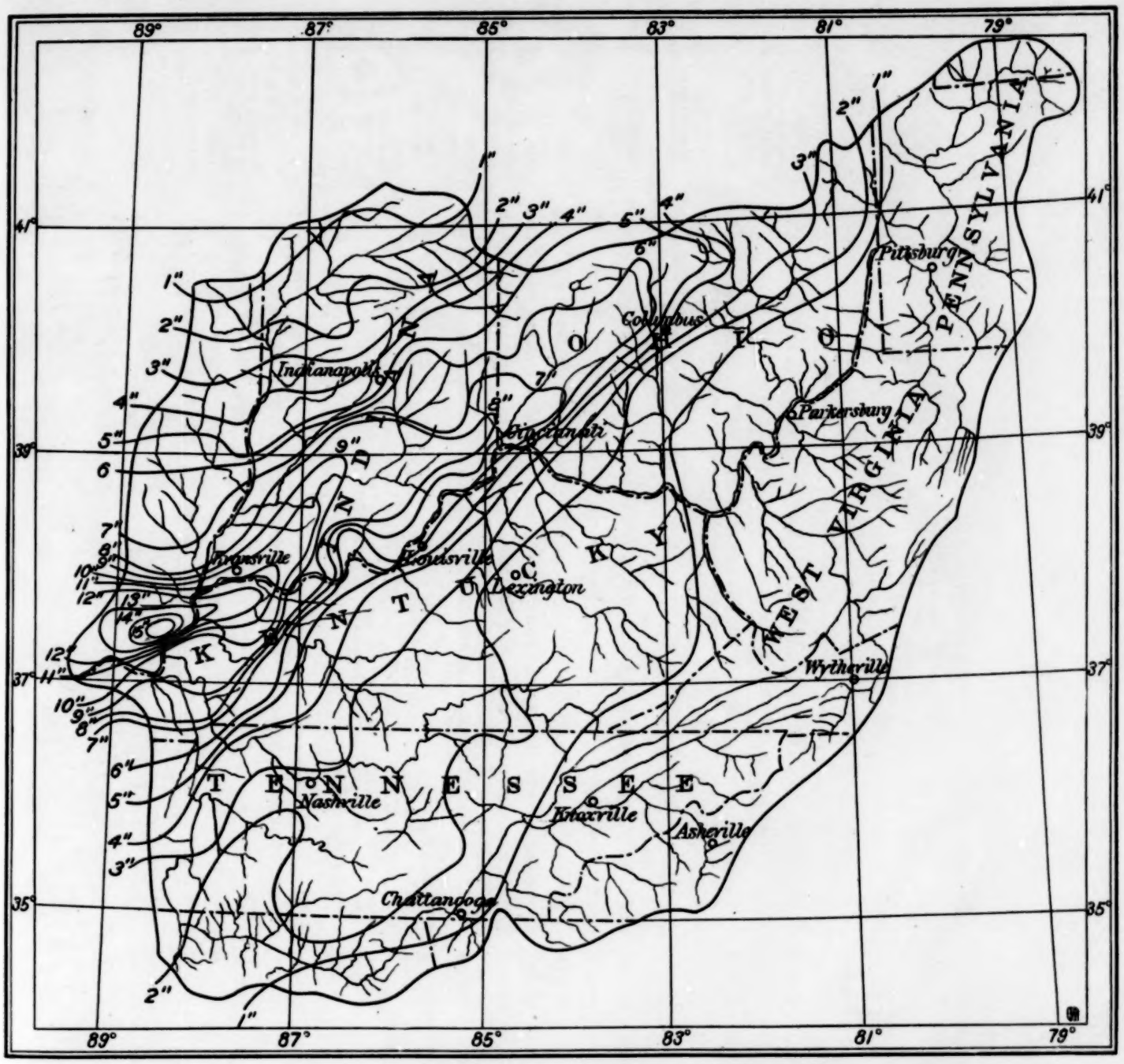


Fig. 1.—Heavy rainfall in the lower Ohio Valley, October 3 to 6, 1910.

TABLE 1.—*Climatological data for October, 1910. District No. 3, Ohio Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New York.																				
Allegany	Cattaraugus	1,441	4	52.0	.....	83	18	17	30	49	3.73	.....	0.78	7.8	10	14	9	8	nw.	Charles E. Whitney.
Bolivar	Allegheny	1,800	16	49.0	+ 0.2	82	18	14	29	50	1.84	− 1.50	0.68	3.0	6	12	8	11	sw.	Lowell Andrus.
Franklinville	Cattaraugus	1,598	13	51.0	+ 1.5	79	18	13	29	43	4.46	+ 0.93	0.83	7.0	10	8	14	9	nw.	Dr. John W. Kales.
Olean	do	.....	2	.....	.....	.....	.....	.....	.....	.....	3.27	.....	0.88	.....	11	.....	.....	.....	w.	John W. Alles.
Pennsylvania.																				
Aleppo	Greene	1,135	9	57.4	.....	89	3	19	30	50	1.80	.....	0.85	T.	5	21	1	9	n.	J. S. Hinerman.
Baldwin	Butler	1,404	4	54.6	.....	78	4	23	30	36	2.30	.....	1.08	T.	10	13	10	8	w.	S. H. Templeton.
Claysville	Washington	1,127	6	57.8	.....	91	3	19	30	51	1.92	.....	0.61	1.2	7	17	9	5	w.	E. T. Buchanan.
Franklin	Venango	955	36	54.2	+ 1.8	81	19†	27	28	46	3.36	+ 0.48	0.72	2.0	11	16	6	9	w.	F. E. Dixon.
Greenville	Mercer	950	14	53.2	+ 3.6	82	3†	22	29	44	4.35	+ 1.13	1.32	3.4	11	21	3	7	nw.	A. M. Orr.
Indiana	Indiana	1,350	13	56.8	+ 6.0	88	3	22	30	44	1.89	− 1.14	1.05	0.0	5	22	3	6	s.	Rev. J. M. Welch.
Johnstown	Cambria	1,184	22	56.7	+ 3.4	86	6	25	30	42	1.53	− 1.06	0.76	0.5	8	12	16	3	sw.	E. C. Lorents.
Lycippus	Westmoreland	1,420	18	59.6°	+ 5.1	83	5†	32	28	36°	2.04	− 0.40	1.48	0.5	5	.....	.....	.....	.....	Murray Forbes.
Pittsburg	Allegheny	842	40	57.6	+ 2.8	84	3	28	30	36	1.69	− 0.63	0.78	T.	9	19	4	8	nw.	U. S. Weather Bureau.
Saegerstown	Crawford	1,116	19	52.4	+ 2.1	81	18	14	29	42	5.23	+ 2.25	1.30	7.0	12	6	11	14	sw.	J. G. Apple.
Skidmore	Lawrence	1,000	6	54.8	.....	80	3†	21	29	40	1.85	.....	0.75	1.0	4	24	0	7	sw.	W. H. Stoner.
Somerset	Somerset	2,250	54	54.5	+ 6.1	86	5	18	30	42	1.58	− 1.22	1.07	1.0	4	10	14	7	nw.	W. M. Schrock.
Uniontown	Fayette	999	22	58.8	+ 4.8	87	5	26	30	40	1.48	− 1.52	0.80	T.	5	11	15	5	sw.	Wm. Hunt.
Warren	Warren	1,137	21	51.9	+ 1.0	80	4	21	29	44	3.92	+ 0.93	0.90	5.0	9	19	0	12	nw.	Anna Simpson.
Maryland.																				
Deer Park	Garrett	.....	16	51.8	+ 3.5	84	5†	15	30	42	1.31	− 0.96	0.53	1.0	6	.....	.....	.....	.....	S. P. Specht.
Grantville	do	.....	16	53.8	+ 3.9	84	5	18	30	35	1.44	− 0.89	0.62	2.0	6	14	6	11	.....	J. S. Miller.
Oakland	do	.....	10	53.3	.....	85	5	15	30	44	1.75	.....	0.60	0.2	6	14	12	5	w.	R. E. Weber.
West Virginia.																				
Bancroft	Putnam	.....	6	61.4°	.....	90°	3	26	30	40°	1.44	.....	0.73	T.	5	20	0	11	ne.	James Hill.
Beckley	Raleigh	2,440	11	57.4	+ 3.4	82	5†	18	30	40	1.59	− 0.51	0.69	1.5	4	19	5	7	w.	John A. Ewart.
Ben's Run	Pleasants	622	9	60.4	+ 5.1	92	3	26	30†	46	3.05	+ 0.40	1.05	T.	8	24	3	4	.....	J. D. Riggs.
Bluefield	Mercer	2,563	15	58.1	+ 2.9	81	8	20	30	32	2.51	− 0.08	0.75	3.0	9	15	7	9	.....	Norfolk & Western Ry.
Buckhannon	Upshur	1,472	20	56.1	+ 3.3	88	5	22	30	45	2.31	− 0.83	0.78	T.	6	24	1	6	.....	H. A. Darnall.
Cairo	Ritchie	667	8	61.0	+ 4.8	90	4	25	30	48	2.08	.....	0.60	0.0	5	2°	17°	11°	sw	Van A. Zevely.
Central Station	Doddridge	900	11	56.4	+ 1.6	88	3	17	30	50	1.46	− 0.83	0.54	1.0	6	15	10	6	sw.	G. W. Sherwood.
Charleston	Kanawha	598	24	61.2	.....	87	5	32	29	33	1.62	− 0.87	0.95	T.	4	21	2	8	w.	R. C. Hewes.
Creston	Wirt	612	10	58.7	.....	89	1	19	30	44	1.94	− 0.36	0.82	0.0	5	20	2	9	w.	J. M. Reed.
Cuba	Jackson	544	9	58.8	.....	87	1†	17	30	41	0.94	− 1.92	0.52	T.	4	18	9	4	nw.	C. T. Perry.
Elkhorn	McDowell	1,933	18	57.6	+ 2.2	82	5†	19	30	35	2.40	+ 0.07	0.71	3.5	7	23	5	3	w.	J. J. Lincoln.
Elkins	Randolph	1,940	11	55.8	+ 4.5	85	3	22	30	45	2.21	− 0.21	0.59	1.4	9	11	13	7	w.	U. S. Weather Bureau.
Fairmont	Marion	879	18	59.5	.....	93	3	20	30	50	1.50	− 0.98	0.78	T.	6	.....	.....	.....	.....	H. Glenn Fleming.
Glenville	Gilmer	738	22	59.3	+ 4.7	89	3†	22	30	46	1.96	− 0.90	0.68	T.	4	14	2	15	.....	John Holt.
Grafton	Taylor	985	18	58.6	+ 3.8	90	3†	22	30	50	2.64	+ 0.18	1.54	1.0	7	24	1	6	.....	John W. Snider.
Green Sulphur Springs	Summers	1,600	14	57.4	+ 3.6	84	6	22	31	43	1.84	+ 0.37	0.42	1.0	11	20	3	8	w.	John W. Dalton.
Hinton	do	1,400	21	59.6	+ 3.5	88	6	23	30	42	1.42	− 0.72	0.52	1.5	10	21	6	4	sw.	J. B. Lavender, C. E.
Huntingdon	Cabell	510	15	59.4	+ 3.3	88	3†	26	30	37	1.84	− 0.21	1.00	T.	4	21	2	8	w.	L. H. Hutchinson.
Lewisburg	Greenbrier	2,200	10	.....	.....	80	5†	21	31	...	1.18	− 1.40	0.47	T.	4	24	1	5	nw.	Geo. T. Atgabrite.
Logan	Logan	665	8	64.4	.....	93	21	27	30	40	2.30	.....	1.15	T.	4	10	19	2	w.	H. C. Ragland.
Lost Creek	Harrison	1,033	14	58.0	+ 3.8	89	3	22	30	51	1.55	− 0.73	0.78	1.0	5	20	3	8	w.	Allen Smith.
Madison	Boone	704	5	57.3°	.....	87°	5	25°	30	37°	2.07	.....	0.56	4.0	7	14°	9°	5°	.....	S. E. Bradley.
Mannington	Marion	967	7	57.3	.....	87	3	17	30	49	1.51	.....	0.78	0.4	6	21	2	8	sw.	Jas. A. Morgan.
Marlinton	Pocahontas	2,169	11	50.7°	+ 0.2	73	4	20	30	32°	2.03	− 0.27	1.00	T.	4	19°	2°	7°	.....	C. J. McCarty.
Morgantown	Monongalia	1,250	36	59.6	+ 4.7	88	3	26	30	37	1.77	− 1.21	0.88	T.	5	22	5	4	s.	Horace Atwood.
Moundsville	Marshall	640	8	59.9	.....	91	3	21	30	50	2.03	.....	0.70	T.	5	24	1	6	sw.	J. E. Matthews.
New Cumberland	Hancock	987	10	57.2	+ 3.1	86	3	22	20	46	1.75	− 0.82	0.67	T.	5	16	5	10	s.	Frank S. Evans.
New Martinsville	Wetzel	634	17	61.6	+ 5.3	92	3	24	30	48	2.09	− 0.29	0.70	0.0	6	25	1	5	s.	Wm. Ankron.
Nuttallburg	Fayette	2,252	18	52.8	.....	80	5	21	30	36	2.57	+ 0.37	0.71	0.2	8	20	5	6	.....	Stephen Tully.
Parkersburg	Wood	638	22	59.6	+ 5.1	89	3	26	30	42	1.15	− 1.29	0.71	T.	7	14	7	10	s.	U. S. Weather Bureau.
Parsons	Tucker	1,662	11	56.4	+ 3.9	90	6	19	30	52	1.50	− 0.96	0.90	T.	4	18	9	4	sw.	J. W. Swisher.
Philippi	Barbour	1,192	18	57.6	+ 3.8	90	3	20	30	50	1.68	− 0.80	0.73	0.3	7	8	16	7	nw.	J. D. Dadisman.
Pickens	Randolph	2,785	20	53.4	+ 1.5	80	5†	15	29°	34°	2.96	− 0.48	0.79	3.0	7	21°	3°	6°	w.	Dr. J. L. Cunningham.
Pineville	Wyoming	.....	2	.....	.....	91	3†	.....	.....	.....	1.73	.....	0.63	.....	.....	.....	.....	.....	.....	W. V. Senter.
Point Pleasant	Mason	553	21	60.8	+ 3.4	93	3	24	30	47	1.46	− 0.86	0.84	T.	4	21	1	9	se.	W. D. Holmes.
Powellton	Fayette	904	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. A. W. DeBell.
Princeton	Mercer	2,469	10	52.8	.....	77	6	19	30	33	2.40	− 0.38	1.00	2.0	9	17	9	5	w.	H. Scott.
Robertsburg	Putnam	.....	1	59.1	.....	92	3	24	30	45	1.13	.....	0.66	T.	4	.....	.....	.....	.....	E. P. Turley.
Ryan	Roane	639	7	57.1	.....	88	3†	18	30	46	1.53	.....	0.55	T.	3	21	2	8	.....	Wm. E. Ryan.
Smithfield	Wetzel	.....	6	55.0	.....	83	20	20	30	37	1.93	.....	1.01	T.	3	13	8	4	ne.	G. M. Whisler.
Spencer	Roane	710	7	59.2	.....	95	3	17	30	56	1.49	− 1.13	0.79	T.	3	4	22	5	.....	A. M. McKown.
Sutton	Braxton	.....	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. E. Baughman.
Terra Alta	Preston	3,207	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. F. Dodge.
Union	Monroe	.....	7	54.4	.....	82	5	19	30	41	2.23	.....	0.63	1.0	6	.....	.....	.....	.....	Shelton Clark.
Valley Fork	Clay	.....	7	61.6	.....	92	2	18	31	50	1.19	.....	0.59	0.0	3	10	19	2	.....	Miss Blanche Pierson.
Webster Springs	Webster	1,500	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. H. Hamrick.
Wellsburg	Brooke	1,225	10	56.6	+ 3.2	80	3	25	30	3..	1.91	− 0.84	0.85	T.	5	18	8	5	w.	C. P. Waugh.
Weston	Lewis	824	21	58.1	+ 2.5	88	3†	20	30	48°	1.80	− 1.16	0.72	1.8	7	20	7	4	w.	Miss C. M. Davis.
Wheeling	Ohio	645	26	57.7	.....	87	3	22	30	44	1.78	− 0.57	0.86	T.	6	18	6	7	s.	Miss M. B. Forsyth.
Williamson	Mingo	660	10	52.0	+ 3.9	90	3†	27	30	36	1.60	− 0.51	0.52	1.0	7	16	8	7	se.	J. F. Keyser.
Ohio.																				
Amesville	Athens	630	6	59.1	.....	94	3	18	30	56	1.74	.....	0.52	0.8	5	21	8	2	nw.	F. W. Gibson.
Bangorville	Richland	1,380	23	56.7	+ 5.0	87	3	23	29†	40	7.21	+ 4.97	3.22	0.5	10	17	11	3	sw.	S. M. Painter.
Bellefontaine	Logan	1,276	16	55.4	+ 1.6	84	3	23	30	45	6.45	+ 4.01	2.98	T.	6	16	9	6	sw.	Cory L. Lane.
Bladensburg	Knox	1,100	19	55.0	+ 3.5	88	3	19	30	49	5.15	+ 2.98	2.00	T.	8	18	7	6	sw.	Miss Mary Elliott.
Cadiz	Harrison	1,245	7	57.2	.....	86	3	23	29†	41	1.61	.....	0.55	T.	8	16	10	5	w.	Harry B. McConnell.
Cambridge	Guernsey	803	18	57.5	+ 5.0	89	3	21	30	49	1.63	− 0.59	0.55	T.	4	14	16	1	.....	Samuel Mehaffey.
Camp Dennison	Hamilton	570	17	58.1	+ 2.9	89	3	24	30	41	5.33	+ 3.53	3.62	T.	8	23	4	4	w.	Henry F. Pinkvoss.
Canal Dover	Tuscarawas	884	17	55.1	+ 3.5	83	3	23	30	45	3.38	+ 1.33	1.15	T.	7	16	12	3	w.	Ed. S. Slingluff.
Canton	Stark	1,065	27	55.6	+ 4.1	82	3	28	29	36	4.28	+ 2.05	1.80	0.2	8	16	9	6	se.	Prof. C. F. Stokey.
Cardington	Morrow	1,010	15	55.7	+ 4.4	88	3	23	30	41	7.24	+ 5.58	3.46	0.5	9	22	2	7	w.	Ansel E. Salisbury.
Chillicothe	Ross	630	.....	.....	.....	.....	.....	.....	.....	.....	2.81	.....	0.98	.....	3	.....	.....	.....	.....	Owen L. Brown.
Cincinnati	Hamilton	628	39	60.0	+ 3.0	89	3	29	29	31	5.78	+ 3.46	4.30	T.	6	18	6	7	sw.	U. S. Weather Bureau.
Circleville	Pickaway	694	22	59.8	+ 4.9	91	3	21	30	41	2.59	+ 0.42	1.00	0.4	5	19	4	8	nw.	Hon. S. W. Courtright
Clarington	Monroe	600	7	59.0	.....	90	3	21	30	50	2.08	.....	1.20	T.	4	21	2	8	sw.	Col. S. Tschappat.
Columbus	Franklin	918	32	57.8	+ 3.7	88	3	27	30	35	5.22	+ 2.87	3.18	0.5	6	19	3	8	w.	U. S. Weather Bureau.
Coshocton	Coshocton	770	1	.....	.....	.....	.....	.....	.....	.....	4.28	.....	1.72	.....	7	.....	.....	.....	.....	Mrs. Ada Jeffries.
Dayton	Montgomery	790	29	57.6	+ 3.5	89	3	26	30	37	7.08	+ 4.92	3.82	T.	6	21	6	4	sw.	Mrs. Edith L. Boyer.
Delaware	Delaware	927	13	53.4	+ 2.7	88	3	25	30	41	7.24	+ 5.23	3.87	0.3	8	19	5	7	sw.	Prof. L. L. Hudson.
Demos	Belmont	1,325	22	59.7	+ 6.9	90	3	20	30	47	1.92	− 0.51	0.61	0.5	8	19	8	4	s.	J. T. Dysart.
Dennison‖	Tuscarawas	908	.....	58.1	.....	90	3	20	30	51	2.27	.....	0.89	T.	6	17	10	4	s.	Water Supply Co.
Frankfort	Ross	750	18	59.3	+ 7.6	90	15†	23	30	40	1.90	+ 0.71	1.10	T.	3	20	6	5	s.	O. A. Cory.
Garrettsville	Portage	1,005	26	54.0	+ 4.7	83	3†	24	30	45	3.71	+ 1.03	1.27	0.8	10	18	7	6	nw.	S. M. Luther.

TABLE 1.—*Climatological data for October, 1910. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Cont'd.																				
Granville	Licking	960	28	56.2	+ 3.6	87	3	24	30	43	4.68	+ 2.27	1.75	T.	7	21	3	7	sw.	Dr. L. E. Davis.
Gratiot‖	do	1,000	21	57.4	+ 4.5	85	3	21	30	42	2.75	+ 0.71	1.05	1.0	7	17	8	6	sw.	W. B. Longstreth.
Green	Adams	500	17	61.7	+ 5.8	89	3	32	27	36[a]				T.		22	7	2	w.	W. F. Kenyon.
Green Hill	Columbiana	1,135	18	53.1	+ 2.3	85	3	19	30	46	3.18	+ 1.12	1.20	0.3	7	19	9	3	sw.	Jos. E. Bentley.
Greenville	Darke	1,060	24	56.5	+ 4.4	83	3†	29	29†	32	5.54	+ 3.58	2.50	T.	6	17	8	6	w.	G. A. Katzenberger.
Hillsboro	Highland	1,063	31	58.6	+ 3.2	87	3	23	30	35	2.95	+ 0.86	2.18	T.	6	10	15	6	sw.	Carey H. Roush.
Ironton	Lawrence	575	27	60.8	+ 5.8	93	3	23	30	45	1.67	− 0.76	0.62	T.	4	20	7	4	sw.	James Bull.
Jacksonburg	Butler	975	42	58.0	+ 2.3	88	3	25	30	28	7.96	+ 5.77	.....	T.	5	22	4	7	ne.	Dr. J. B. Owsley.
Kenton	Hardin	1,015	18	55.2[a]	+ 2.5	85[a]	4	25[a]	30	48	5.62	+ 3.23	2.86	T.	7	15	8	8	.....	N. S. Martin.
Killbuck	Holmes	1,087	18																	Geo. W. Nowels.
Lancaster	Fairfield	898	15	58.0	+ 4.0	86	3	25	30	39	1.50	− 0.43	0.87	T.	4	23	5	3	sw.	R. L. Renshaw.
Lawsbe	Adams	900	7																	Miss Ruth Hoffman.
McConnelsville	Morgan	710	26	57.6	+ 4.1	90	3	22	30	49	2.02	− 0.28	0.87	0.5	8	12	10	9	s.	C. H. Morris.
Marietta	Washington	627	90	59.0	+ 6.0	86	3	26	30	41	1.41	− 1.46	0.67	T.	7	19	6	6	s.	Prof. T. D. Biscoe.
Marion	Marion	980	32	57.6	+ 4.2	88	3	25	29†	40	7.34	+ 5.72	3.06	0.5	8	14	11	6	sw.	Dr. E. H. Raffensperger.
Milfordton	Knox	1,200	18	56.8	+ 5.1	85	3	23	30	42	5.57	+ 3.66	2.22	0.5	7	21	6	4	sw.	L. H. Burgess.
Milligan‖	Perry	875	17	56.9	+ 3.2	91	3	19	30	56	2.83	+ 0.47	0.98	1.0	9	21	7	3	sw.	V. C. Eveland.
Millport	Columbiana	1,145	18	54.2	+ 2.3	84	3	21	30	46	2.37	+ 0.32	0.68	0.1	7	16	11	4	nw.	G. F. Copeland.
Nellie	Coshocton	850	10	56.0	+ 3.4	89	14	30	30	49	4.60	+ 2.66	1.50	0.0	6	21	5	5	w.	Miss Ethel L. Gamertsfelder
New Alexandria	Jefferson	1,050	25	57.0	+ 4.0	88	4	21	28†	45	2.55	+ 0.09	1.50	T.	3	20	8	3	w.	Mrs. Mary K. Pennell.
New Berlin	Stark	1,100	18																	Clayton Holl.
New Waterford	Columbiana	1,053	16	54.3	+ 2.7	83	3	22	30	46	2.58	+ 0.51	.....	1.0	...	18	4	9	sw.	Sam. C. Scott.
Ohio State University	Franklin	757	27	57.2	+ 5.0	88	3	27	29†	39	5.16	+ 3.05	2.22	0.3	6	20	6	5	w.	Prof. H. C. Lord.
Pataskala	Licking	997	18	56.9	+ 3.5	87	3	23	30	42	4.66	+ 2.43	1.80	0.9	8	18	11	2	sw.	J. N. Ridenour.
Philo(1)	Muskingum	1,018	15	58.8	+ 4.3	90	3	24	29	43	2.19	+ 0.29	0.62	0.3	7	20	7	4	nw.	L. C. Burckholter.
Piqua	Miami	847	2								7.09	.....	2.80	T.	5	18	0	13	se.	Harry L. Roberts.
Plattsburg	Clarke	1,130	17	57.0	+ 2.7	86	3	25	30	35	7.04	+ 5.08	3.72	T.	3	21	3	7	nw.	F. E. Stewart.
Pomeroy	Meigs	781	26																	W. L. Russell.
Portsmouth	Scioto	527	79	59.2	+ 3.6	87	3	25	30	37	1.99	− 0.70	1.21	T.	4	19	3	9	w.	Dr. H. A. Schirrmann.
Prospect	Marion	909									5.89		3.14		5					Neil J. Gast.
Rittman	Wayne	990	18	55.6	+ 4.4	86	3	22	30	41	4.18	+ 1.87	2.10	T.	5	18	7	6	n.	J. B. Gish.
Shenandoah‖	Richland	1,100	18	55.3	+ 3.6	86	4	24	29	45	4.69	+ 2.79	2.04	0.5	6	11	17	3	s.	T. B. Arnett.
Sidney	Shelby	985	27	57.0	+ 4.6	87	3	26	30	36	6.25	+ 3.79	3.25	0.2	5	21	1	9	sw.	Hamline B. Blake.
Somerset	Perry	1,080	11	57.7	+ 2.5	90	3	24	30	37	2.93	+ 0.64	1.10	0.5	9	21	5	5	sw.	Miss M. W. C. Sheridan.
Springfield	Clarke	1,002	16								6.74	+ 4.75	3.24	T.	7	16	11	4	sw.	W. A. Webster.
Summerfield	Noble	1,187	4	57.6		90	3	22	30	52[a]	1.27	.....	0.29	T.	8	14	13	4	sw.	H. R. McClintock.
Thurman	Gallia	696	17	61.3	+ 5.4	92	3	33	29	45	1.59	− 0.34	0.50	T.	4	14	11	6	w.	D. D. Thomas.
Urbana	Champaign	1,031	40	56.4	+ 2.8	87	3	22	30	41	6.67	+ 4.48	3.50	0.5	6	19	8	4	w.	Prof. J. H. Williams.
Warren	Trumbull	900	21	54.9	+ 3.5	85	3†	27	29†	44	3.45	+ 1.08	1.27	1.5	9	13	11	7	nw.	M. D. McCorkle.
Waverly‖	Pike	590	27	60.4	+ 5.2	93	3	22	30	49	2.42	+ 0.33	0.63	T.	7	23	3	5	s.	Herrmann A. Lorbach.
Waynesville	Warren	700	25	58.4	+ 3.7	88	4	25	30	33[a]	8.03	+ 5.89	4.38	T.	6	19	5	7	w.	Charles Michener.
Wooster	Wayne	1,030	30	54.9	+ 3.8	85	3	24	29†	42	5.24	+ 3.00	2.35	0.2	8	12	7	12	sw.	Experiment Station.
Youngstown	Mahoning	846	18								3.75	+ 1.55	1.87	.....	8	20	0	11	w.	G. R. Patton.
Zanesville	Muskingum	700	23								2.20	− 0.01	0.80	.....	8	16	1	14	s.	S. G. Sprague.
Virginia.																				
Big Stone Gap	Wise	1,540	19	58.8	+ 4.1	83	6†	21	30	36	1.30	− 0.97	0.48	0.0	4	25	0	6	w.	John W. Fox, sr.
Blacksburg	Montgomery	2,170	19	55.4	+ 3.0	80	3†	23	30	39	3.21	+ 0.53	1.20	0.5	10	15	8	6	w.	Agricultural Exp. Station.
Burksgarden	Tazewell	3,250	15	51.9	+ 2.2	75	17	16	30	41	2.55	− 0.62	0.73	4.0	6	16	7	8	w.	C. H. Greever.
Elk Knob	Lee	3,243	7	59.5	.....	80	5†	24	29	29	2.30	.....	0.98	0.5	8	19	7	5	nw.	Henry Nicoll.
Galax	Grayson	2,300	....	57.0	.....	80	2	20	30†	42	4.02	.....	1.92	T.	5	18	3	10	nw.	E. C. Williams.
Ivanhoe**‖	Wythe	2,028	6	55.0	.....	76	2†	26	31	32	4.05	.....	1.28	0.5	14	17	11	3	w.	Miss Alice G. Jewett.
Lebanon	Russell	2,131	....	56.6	.....	83	2	15	30	38	1.90	.....	0.57	3.0	6	21	7	3	nw.	R. W. Swain.
Marion	Smyth	2,224	15	56.4	+ 3.5	85	17	12	30	38	2[30]	− 0.26	0.65	3.0	6	22	6	3	w.	S. W'n State Hospital.
Max Meadows	Wythe	2,028	14	56.4[f]	+ 2.9	81	31	22	30	38	2.53	.....	0.85	T.	8	.....	.....	.....	w.	James M. Graham.
Mendota‖‖	Washington	1,350	1																.....	Frank M. Baker.
Radford‖‖	Montgomery	1,773	1								3.70	.....	1.02	0.0	6	.....	.....	.....	.....	Arthur Roberts.
Speers Ferry‖‖	Scott	1,221	14								1.34	.....	0.54	0.0	6	.....	.....	.....	.....	Mrs. L. E. Venable.
Wytheville	Wythe	2,293	17	56.7	+ 3.1	80	2	23	30	34	2.94	− 0.20	0.91	0.1	11	17	7	7	w.	U. S. Weather Bureau.
North Carolina.																				
Altapass	Mitchell	2,629	....																	C. C. & O. Railway.
Andrews	Cherokee	1,800	....	61.4	.....	90	1†	18	30	48	1.43	.....	0.71	0.4	5	20	7	4	sw.	J. D. Link.
Asheville	Buncombe	2,250	31	57.8	+ 2.5	84	2	20	30	34	2.64	− 0.20	1.82	T.	7	19	7	5	nw.	U. S. Weather Bureau.
Banners Elk	Watauga	3,750	2	52.0	.....	75	2	11	30	36	2.91	.....	0.64	4.9	11	21	4	6	w.	T. L. Lowe.
Brevard	Transylvania	2,230	9	58.8	.....	83	9	15	30	44	2.88	.....	1.26	0.0	7	20	11	0	n.	W. E. Breese.
Bryson City	Swain	2,000	22								0.93	− 1.68	0.31	0.1	7	.....	.....	.....	.....	D. K. Collins.
Cullowhee	Jackson	2,100	....	60.4	.....	85	2	15	30	44	2.47	.....	1.63	1.0	5	24	1	6	nw.	F. H. Brown.
Hendersonville	Henderson	2,167	14																	T. W. Valentine.
Highlands	Macon	3,670	20	54.2	+ 2.8	78	2	12	30	37	4.98	− 0.17	2.39	0.5	5	17	9	5	se.	T. G. Harbison.
Hot Springs	Madison	1,326	12	61.8[a]	+ 4.8	85[a]	2†	21[a]	30	42[a]	1.47	.....	0.49	T.	5	22	2	7	e.	P. A. Garner.
Jefferson	Ashe	2,800	3	58.2	.....	82	2	24	30	39	4.13	.....	1.75	0.2	7	12	8	11	w.	E. J. Johnson.
Marshall	Madison	1,646	9	60.7	.....	86	2	27	29	36	1.21	.....	0.72	0.2	6	.....	.....	.....	.....	W. E. Finley.
Murphy	Cherokee	1,614	34								1.57	− 1.38	0.98	0.5	6	.....	.....	.....	.....	Miss J. Campbell.
Rock House	Macon	3,100	18	57.7	+ 2.0	80	2	19	30	32	3.53	− 1.32	1.74	0.5	10	19	6	6	nw.	B. C. Hawkins.
Waynesville	Haywood	2,756	16	56.0	+ 2.5	84	2	14	30	46	2.07	− 0.31	0.88	2.5	8	.....	.....	.....	.....	J. C. L. Gudger.
Georgia.																				
Diamond	Gilmer	2,020	20	60.8	+ 3.8	84	2	20	30	40	2.64	− 0.51	1.22	0.3	7	23	3	5	.....	R. A. Kimzey.
La Fayette	Walker	841	4	62.0	.....	85	3†	21	30	39	3.85	.....	1.07	T.	6	19	5	7	w.	Ralph A. Snow.
Alabama.																				
Bridgeport	Jackson	660	10								3.24	+ 0.06	2.00	0.3	7	17	0	14	ne.	R. L. Moore.
Decatur	Morgan	573	28	64.9	+ 4.0	93	2	28	30	39	4.31	+ 1.87	2.02	T.	7	20	0	11	e.	Ernest A. Carriger.
Florence	Lauderdale	563	26	65.8	+ 4.6	90	2	30	29	33	3.60	+ 1.70	1.62	T.	7	22	1	8	e.	Robt. E. Coburn.
Guntersville	Marshall	580	5	65.0	.....	90	2	39	30	31	3.98	.....	1.58	0.0	7	15	11	5	n.	L. S. Long.
Madison	Madison	573	16	64.0	+ 2.1	94	2	23	29	40	4.60	+ 1.57	2.60	T.	5	21	5	5	nw.	Albert Klish.
Riverton	Colbert	360	13	62.8	+ 1.9	98	1	21	29	44	3.26	+ 0.39	1.08	0.0	7	22	2	7	e.	Ernie J. Moore.
Scottsboro	Jackson	652	27	63.6[a]	+ 3.3	90	2	23[a]	30	40[a]	3.35	+ 1.04	1.30	T.	8	11	8	12	sw.	Miss Irene Caldwell.
Tuscumbia	Colbert	488	28	62.8	+ 1.9	90	2	28	29†	37	3.48	+ 1.31	1.35	T.	6	18	3	10	nw.	Samuel Moore.
Tennessee.																				
Ashwood	Maury	725	31	32.5	+ 2.8	92	3	23	30	38	2.73	+ 0.11	1.30	T.	6	15	10	6	n.	Mrs. J. W. Fleming.
Benton	Polk	880	25	61.8	+ 2.4	87	3†	20	30	43	2.04	− 0.48	0.76	T.	5	18	10	3	n.	G. L. Williams.
Birds Bridge	Greene	.....	4								1.90	.....	0.58	0.2	6	20	2	9	e.	D. B. George.
Bluff City	Sullivan	.....	13								2.16	+ 0.10	0.84	T.	3	19	2	10	.....	J. W. Fisher.
Byrdstown	Pickett	1,026	17	60.9[d]	+ 2.5	82[d]	13†	25	30	35[d]	2.70	− 0.13	1.80	T.	3	.....	.....	.....	w.	John Lacy.
Carthage	Smith	500	26	64.0	+ 4.9	93	2	24	30	45	3.40	+ 1.16	1.55	T.	8	19	0	12	ne.	E. C. Pickering.
Cedar Hill	Robertson	625	10																.....	J. F. Ruffin.
Celina	Clay	494	7								3.34	.....	1.63	.....	6	22	2	7	.....	S. B. Anderson.
Cenret Point	Chester	.....	13								3.09	.....	2.00	T.	7	21	1	9	s.	H. H. Bailey.
Charleston	Bradley	.....	13								1.21	− 1.16	0.84	T.	5	19	1	11	n.	J. T. Weeks.

TABLE 1.—*Climatological data for October, 1910. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Tennessee—Cont'd.																			
Chattanooga	Hamilton	808	31	63.8	+ 3.0	89	2	28	30	35	2.29	− 0.55	1.22	T.	7	20	5	6	nw.	U. S. Weather Bureau.
Clarksville	Montgomery	520	47	60.8	+ 1.1	88	3	27	30	39	4.58	+ 2.28	2.25	T.	7	22	3	6	n.	Prof. Jas. A. Lyon.
Clinton	Anderson		22								1.05	− 1.25	0.55	T.	3	23	0	8	se.	John Thompson.
Dandridge	Jefferson		6								2.32		0.80		4	26	0	5	w.	J. E. Swann.
Decatur	Meigs	850	14	62.3	+ 2.5	93	2	19	30	45	1.80	− 1.20	0.78	T.	7	23	1	7	sw.	J. W. Lillard.
Dickson	Dickson	800	14	61.2	+ 0.9	91	2	24	29†	44	3.40	+ 1.21	1.40	T.	6	16	9	6	n.	N. R. Sugg.
Dover	Stewart		15	61.6	+ 1.4	96	2	24	30	43	6.27	+ 3.89	4.07	T.	3	16	8	7	s.	A. M. Tippit.
Dunlap	Seaquatchee	726	1	62.6	.....	93	2	20	30	46	2.21	.....	1.22	0.3	9	20	7	4	.....	S. B. Boyd.
Elizabethton	Carter	1,575	20								1.52	− 0.57	0.72	T.	3	25	0	6	e.	Chas. Boyd.
Erasmus	Cumberland	1,850	13	57.5	+ 1.5	87	2	16	30	46	3.19	− 0.38	2.18	0.7	7	17	8	6	se.	Mrs. E. D. Ashley.
Florence	Rutherford	560	28	61.8	+ 2.4	91	2	24	30	36	2.79	+ 0.48	1.65	T.	6	19	5	7	s.	Erastus P. Bell.
Franklin	Williamson	655	20	61.4	+ 1.9	90	1	26	30	39	2.62	+ 0.31	1.10	T.	6	18	4	9	.....	J. L. Parkes, jr.
Halls Hill	Rutherford		8								4.33		1.03	.....	7	19	0	12	s.	Ed. F. Wright.
Harriman	Roane	841	15	61.4	+ 2.7	88	2†	21	30	37	1.99	− 0.56	1.48	.....	2	18	9	4	.....	Robert R. Ayers.
Hohenwald	Lewis	983	24	61.4	+ 3.2	92	2	20	30	40	2.71	+ 0.49	1.25	T.	5	22	6	3	nw.	John Lutzelman.
Iron City	Lawrence		13	62.2	+ 1.6	92	3	23	30	43	4.61	+ 2.31	1.78	T.	5	7	23	1	nw.	Capt. H. P. Seavy.
Jefferson City	Jefferson										1.17		0.50	T.	4					C. Calvin Maddox.
Johnson City	Washington										2.15		0.68	0.5	7	21	5	5	w.	Ward Crosby.
Johnsonville	Humphreys	364	14	60.8	+ 0.3	92	2	24	30	40	4.34	+ 2.12	2.38	T.	6	19	5	7	s.	Miss Sallie B. Matthews.
Jonesboro	Washington	1,740	15																	Robert A. Lovegrove.
Kingston	Roane		19								1.17	− 1.17	0.69	T.	4	23	0	8	n.	H. Crumbliss.
Knoxville	Knox	977	39	62.0	+ 3.9	87	2	24	30	34	1.68	− 0.93	0.68	T.	5	17	11	3	ne.	U. S. Weather Bureau.
Lebanon	Wilson	522	1	64.2	.....	93	2	32	29	37	3.26	.....	1.76	0.2	7	20	1	10	n.	Logan Fields.
Lewisburg	Marshall	727	15	63.2	+ 3.0	93	2	25	30	43	3.80	+ 0.96	2.15	T.	7	20	4	7	s.	Dr. R. D. Crutcher.
Livingston	Overton																			E. C. Knight.
Loudon	Loudon	816	7								1.25	− 0.71	0.63	0.1	5	17	3	11	e.	Robert W. Clark.
Lynnville	Giles	770	22	62.0	+ 2.0	88	3	24	30	37	3.23	+ 0.73	2.23	T.	6	24	3	4	n.	Col. J. H. Burrow.
McGhee	Monroe		6								1.36		0.52	T.	5	23	0	8	e.	Alice L. Hendricks.
McMinnville	Warren	1,011	26	61.6	+ 3.3	90	2	21	30	42	4.67	+ 2.06	2.00	0.8	9	20	4	7	s.	J. T. Sparkman.
Maryville	Blount	1,050	14																	Mrs. F. E. Benedict.
Mountain City	Johnson	2,486	13	55.8	+ 2.8	82	2	14	30	43	2.42	− 0.49	0.72	0.1	7	17	14	0	.....	E. E. Barry.
Nashville	Davidson	654	39	63.0	+ 2.7	91	2	27	30	38	3.20	+ 0.72	2.41	T.	5	19	6	6	nw.	U. S. Weather Bureau.
Newport	Cocke	1,280	20	60.4	+ 2.8	84	3†	23	30	31	2.30	+ 0.23	1.20	T.	3	24	2	5	w.	Dr. C. T. Burnett.
New River	Scott	1,215	3								3.50		3.05	0.0	3	25	0	6	s.	Burl W. Buttram.
Palmetto	Bedford	770	17	63.1	+ 1.1	93	2	25	29	42	2.79	+ 1.24	2.00	T.	7	18	6	7	nw.	Mrs. Ross Woods.
Pinewood	Hickman		3	60.8	.....	92	1†	19	29†	49	3.11	.....	1.60	T.	7	18	2	11	n.	Miss Carrie Cash.
Pope	Perry		13								4.35	+ 1.76		T.	4	20	7	4	s.	Miss Bessie Howard.
Rogersville	Hawkins	1,150	25	61.4	+ 4.9	89	2†	19	30	43	1.46	− 1.01	0.54	T.	5	24	5	2	e.	Fred. Beal.
Rugby	Morgan	1,410	22	58.3	+ 3.1	88	2	15	30	48	3.24	+ 0.94	1.45	T.	5	22	1	8	n.	S. G. Wilson.
Savannah	Hardin	442	26	62.6	+ 2.3	90	3	25	29	35	3.51	+ 1.31	2.35	0.1	5	20	4	7	.....	W. F. Bell.
Sevierville	Sevier		4	61.0	.....	89	6	19	30	41	1.58	.....	0.86	T.	3	12	8	11	sw.	H. O. Eckel.
Sewanee	Franklin	2,000	14	62.7	+ 4.1	86	2	25	30	33	4.46	+ 1.36	2.65	T.	5	18	0	13	s.	University of the South.
Sparta	White	920	4	63.0	.....	89	2	24	30	43	4.22	.....	2.15	0.5	6	20	1	10	w.	E. H. Hull.
Springdale	Claiborne	1,058	20																	Mrs. Lucy E. Breeding.
Springville	Henry	377	7	60.8	.....	92	2	22	29	43	7.23	.....	5.66	T.	9	22	5	4	n.	H. A. Boden.
Tazewell	Claiborne		13								1.39	− 1.36	0.66	0.1	4	22	4	5	n.	J. C. Carr.
Tullahoma	Coffee	1,075	22	61.0	+ 3.1	91	2	22	30	38	4.28	+ 1.65	1.85	0.1	8	18	10	3	nw.	R. T. Moore.
Walling	White	909	7								3.48		1.90	T.	8	17	5	9	.....	J. K. Roberts.
Waynesboro	Wayne	753	24	62.2	+ 3.3	91	2	22	29	40	3.18	+ 1.24	1.34	T.	5	17	9	5	n.	H. C. Boyd.
Wildersville	Henderson		13	60.9	+ 0.7	89	2	24	29	38	5.06	+ 2.24	2.80	T.	5	19	2	10	n.	W. R. Wilson.
Worsham	Sumner		9								4.55		3.55	T.	4	22	0	9	w.	J. G. Elizer.
Yukon	Lincoln	850	13	61.8	0.0	92	2	26	29	32	4.38	+ 1.63	2.77	T.	6	19	5	7	nw.	W. P. Watson.
Kentucky.																				
Alpha	Clinton		16	61.5	+ 2.4	85	2†	26	30	34	3.40	+ 0.90	2.10	T.	3	21	0	10	w.	W. W. Hicks.
Anchorage	Jefferson	700	9	58.2	+ 2.3	88	3	22	29	40	6.37	+ 3.76	3.38	0.3	5	23	0	8	sw.	C. E. Barrett.
Bardstown‡‡	Nelson	637	14	60.8	+ 1.6	89	1†	24	30	44	3.60	+ 1.79	1.72	T.	5	22	2	7	sw.	G. M. Talbott.
Beattyville‡‡	Lee	650	7	59.6	.....	89	3†	17	30	45	2.16	.....	1.56	1.0	7	11	7	13	nw.	G. W. Cann.
Beaver Dam‡‡	Ohio	441	7	60.4	.....	92	2	26	29†	43[b]	5.23	.....	4.30	T.	4	23[a]	0[a]	7[a]	ne.	T. S. Woodward.
Berea	Madison	1,070	9	60.8	.....	86	17	24	30	42	2.67	+ 0.57	1.00	0.2	6	22	4	5	nw.	C. F. Rumold.
Bowling Green‡‡	Warren	500	21	61.6	+ 2.7	92	2	22	30	42	3.20	+ 1.31	1.50	T.	8	24	0	7	s.	Mrs. L. G. Causey.
Burnside	Pulaski	773	20								2.42	+ 0.12	1.78	T.	4	16	2	13	e.	G. M. Estes.
Cadiz	Trigg		8	62.8	.....	94	1	24	29	42	9.71	.....		T.	6	22	5	4	.....	F. T. Street.
Calhoun	McLean	397	7	62.4	.....	94	1	27	29	38	10.61	.....	4.82	T.	8	16	9	6	se.	W. A. Taylor.
Catlettsburg	Boyd	544	17								1.62	− 0.83	0.98	T.	5	25	0	6	n.	Mrs. Mertie M. Bruns.
Earlington‡‡	Hopkins	370	21	61.1	+ 2.1	95	2	25	29†	43	7.51	+ 5.27	5.50	T.	7	25	0	6	n.	J. B. Atkinson.
Edmonton	Metcalfe	600	19	59.8	+ 2.9	89	2	22	30	40	3.18	+ 1.00	1.82	0.5	6	19	6	6	s.	Miss Lee Ray.
Eubank‡‡	Pulaski	1,177	16	59.6	+ 3.0	87	2	25	29	44	3.11	+ 0.99	1.94	0.1	6	19[d]	1[d]	7[d]	se.	W. H. Henderson.
Falmouth	Pendleton	530	21								2.68	+ 0.51	1.24	T.	5	20	7	4	s.	J. V. Oldham.
Farmers	Rowan	668	5	59.4	.....	91	3	18	30	43	2.53	.....	1.00	T.	5	17	10	4	e.	Miss Gertrude Sorrell.
Frankfort	Franklin	560	20	61.9	+ 5.6	86	4	27	29	44	3.38	+ 1.43	1.51	T.	6	23	2	6	e.	J. H. Roberts.
Franklin	Simpson	691	17	62.2	+ 3.4	93	2	24	29	38	4.14	+ 2.24	2.46	T.	6	8	19	4	nw.	J. E. Newman.
Greensburg‡‡	Green	581	18	58.0	+ 1.3	90	2†	19	30†	48	2.93	+ 0.64	1.25	T.	6	20	0	11	n.	L. C. Alcorn.
Highbridge	Jessamine	762	8								1.90		1.06		7	21	1	9	.....	Miss Lulu Wood.
Hopkinsville‡‡	Christian	524	14	61.1	+ 1.1	95	2	24	29	40	6.85	+ 4.12	3.85	T.	6	20	1	10	n.	W. F. Randle.
Irvington	Breckinridge		12	59.2	+ 6.1	85	1†	27	30	35	5.57	+ 3.11	2.90	T.	4	24	2	5	ne.	W. J. Piggott.
Leitchfield	Grayson	635	15	59.8	+ 2.0	86	1†	25	30	32	3.88	+ 1.96	2.14	0.3	6	23	3	5	ne.	John E. Stone.
Lexington	Fayette	989	23	59.6	+ 3.1	84	3	25	29	31	1.67	− 0.55	1.07	0.5	6	15	12	4	s.	U. S. Weather Bureau.
Loretto	Marion	681	13	59.8	+ 0.7	86	1	25	29	38	2.97	+ 0.95	2.02	T.	5	24	0	7	.....	Loretto Academy.
Louisville	Jefferson	525	38	61.6	+ 3.2	89	1	30	29	30	6.70	+ 4.07	5.06	T.	6	21	5	5	sw.	U. S. Weather Bureau.
Marion	Crittenden		16	62.2	+ 3.1	93	1	26	29	33	9.45	+ 7.20	4.92	T.	3	19	3	9	sw.	B. C. Paris.
Maysville‡‡	Mason	524	14	60.2	+ 2.4	92	3	24	30	43	2.18	− 0.06	1.14	T.	6	20	3	8	se.	Mrs. Mary D. Marsh.
Middlesboro	Bell	1,128	17	62.0	+ 5.8	88	2	20	30	41	1.22	− 0.95	0.37	0.2	5	23	7	1	.....	B. H. Perkins.
Mount Sterling‡‡	Montgomery	930	21	59.4	+ 4.6	87	20	26	30	36	2.21	− 0.19	1.31	T.	4	19	7	5	s.	James O'Connell.
Owensboro‡‡	Daviess	479	14	59.9	+ 1.1	89	1†	27	29	35	9.22	+ 5.99	5.31	T.	6	21	0	10	nw.	Henry S. Berry.
Owenton	Owen	700	14	59.6	+ 2.4	84	3†	24	29	35[b]	4.58	+ 2.30	4.05	T.	3	4	21	6	.....	J. T. Walker.
Paducah‡‡	McCracken	341	17								9.22	+ 6.80	5.00	T.	6	24	0	7	s.	S. A. Fowler.
Pikeville	Pike		1								2.54		0.68	0.5	6	22	3	6	n.	A. R. Williams.
Richmond‡‡	Madison	926	21	61.6	+ 3.7	88	3	27	29†	37	2.44	+ 0.19	1.30	.....	7	19	3	9	.....	J. W. Crooke.
St. John‡‡	Hardin	777	14	59.0	+ 1.6	88	1	23	30	56	4.04	+ 1.94	2.43	0.8	6	25	0	6	.....	Bethlehem Academy.
Scott	Kenton		13	59.5	+ 1.0	88	1†	26	29	38	5.06	+ 3.37	3.32	0.3	7	20	5	6	s.	E. B. Wilson.
Shelby City	Boyle	1,087	16	59.2	+ 1.4	87	3	20	30	45	2.14	+ 0.16	1.00	0.5	7	22	2	7	s.	W. E. Grubbs.
Shelbyville‡‡	Shelby	759	21	60.9	+ 4.5	88	19†	26	29†	40	3.92	+ 1.79	2.08	T.	6	24[a]	1[a]	5[a]	s.	O. M. Lynch.
Taylorsville	Spencer	422	8	58.4	.....	86	1	22	30	33	3.34	.....	2.47	0.2	7	22	3	6	s.	E. D. Bourne.
Williamsburg‡‡	Whitley	939	13	61.2	+ 1.7	91	2	20	30	40	2.39	+ 0.17	1.93	T.	4	14	3	14	e.	Noble C. Jones.
Williamstown‡‡	Grant	943	8	58.8	.....	87	3	24	29†	36	3.47	.....	1.94	T.	5	26	1	4	.....	Mrs. Sarah E. Carter.
Indiana.																				
Anderson	Madison	892	15	58.1	+ 3.4	86	3†	26	29	37	5.21	+ 2.68	1.84	0.2	6	22	4	5	sw.	W. H. Stanton.

TABLE 1.—*Climatological data for October, 1910. District No. 3*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Indiana—Cont'd.																			
Bloomington	Monroe	744	15	57.0	+ 0.1	85	3†	25	29†	39	9.31	+ 5.78	4.02	0.3	8	22	3	6	sw.	Earl E. Ramsey.
Bluffton	Wells	835	15	56.4	+ 3.0	86	3	26	30	39	2.37	+ 0.18	1.23	T.	6	20	6	5	sw.	Prof. P. A. Allen.
Butlerville	Jennings	767	25	59.0	+ 4.1	89	1	22	29	40	9.28	+ 6.66	4.88	1.5	6	24	0	7	.....	C. F. Hole.
Cambridge City	Wayne	941	19	54.6	+ 2.2	85	16†	22	30	44	5.81	+ 3.20	2.96	T.	7	25	0	6	w.	Charles Lemberger.
Columbus	Bartholomew	632	27	57.2	+ 2.8	88	3	25	30	40	8.91	+ 6.24	4.12	0.0	6	22	1	8	sw.	John A. Perry.
Connersville	Fayette	769	28	57.3	+ 4.3	89	3	24	29	42	7.44	+ 4.83	4.29	0.5	6	19	6	6	w.	C. C. Hibbs.
Delphi	Carroll	668	25	57.2	+ 5.3	88	17	25	29	38	1.88	− 0.21	0.89	0.0	7	21	5	5	.....	L. A. Higginbotham.
Eminence	Morgan	782	4	58.2	.....	83	3	22	29	35	5.51	.....	2.40	T.	4	23	3	5	w.	Dr. E. E. Kelso.
Evansville	Vanderburg	386	34	61.4	+ 3.4	90	1	29	29	30	11.19	+ 8.09	6.91	T.	6	19	8	4	s.	U. S. Weather Bureau.
Farmersburg	Sullivan	.....	12	57.9	+ 1.4	85	3	25	29	40[b]	5.43	+ 2.47	2.10	0.2	7	22[a]	4[a]	4[a]	se.	Maurice Yeager.
Farmland	Randolph	1,101	28	56.6	+ 4.0	83	3	29	29	31	5.44	+ 3.15	2.00	0.2	8	19	2	10	se.	W. J. Davisson.
Greenfield	Hancock	905	7	.....	.....	.....	.....	.....	.....	.....	7.08	.....	2.80	T.	6	2	24	5	s.	Prof. W. C. Goble.
Greensburg	Decatur	954	14	58.0	+ 1.6	85	3†	23	29	33	7.30	+ 4.14	4.02	1.0	5	24	1	6	nw.	Chas. H. Ewing.
Huntingburg	Dubois	.....	2	60.8	.....	90	1	26	30	44	10.30	.....	4.45	0.0	3	.....	.....	.....	.....	H. Dufendach.
Huntington	Huntington	741	17	56.3	+ 3.5	82	18	28	29	30	1.81	− 0.67	0.65	0.1	6	20	4	7	sw.	Chas. McGrew.
Indianapolis	Marion	822	39	58.6	+ 3.6	84	3	26	29	32	5.32	+ 2.53	3.40	T.	8	22	3	6	s.	U. S. Weather Bureau.
Jeffersonville	Clark	455	28	60.0	+ 0.7	88	3†	29	29†	31	6.77	+ 4.38	5.16	T.	6	20	5	6	nw.	John C. Loomis.
Judyville	Warren	.....	3	56.2	.....	85	16†	15	29	42	2.43	.....	1.37	T.	7	12	11	8	sw.	Dale R. Warrwick.
Kokomo	Howard	840	18	56.3	+ 2.3	84	3†	23	29	42	2.70	+ 0.52	1.02	T.	6	19	9	3	sw.	P. H. Robertson.
Lafayette	Tippecanoe	617	31	56.8	+ 3.5	85	17	24	29	34	2.58	+ 0.21	1.64	T.	8	22	0	9	s.	Wm. J. Jones, jr.
Logansport	Cass	620	30	57.5	+ 4.4	91	17	24	29	43	2.27	− 0.23	0.78	T.	7	21	1	9	e.	Chas. Massena.
Madison	Jefferson	460	18	59.9	+ 2.4	90	3	26	30	38	8.38	+ 5.86	4.86	T.	6	20	3	8	sw.	Dr. J. Cooperider.
Marengo	Crawford	363	28	57.4	+ 0.8	87	1	23	30	37	5.98	+ 2.83	4.00	T.	6	24	1	6	sw.	J. M. Johnson.
Marion	Grant	814	24	56.2	+ 3.0	86	3	25	29	35	2.62	+ 0.53	0.59	0.8	8	17	8	6	sw.	James F. Hood.
Markle	Huntington	814	15	55.6	+ 2.3	85	3	25	29	37	4.00	+ 1.37	2.00	1.0	5	16	10	5	sw.	I. S. Shideler.
Mauzy	Rush	980	30	57.0	+ 4.9	87	3	22	29	40	7.41	+ 4.54	3.99	0.7	7	19	5	7	sw.	Elwood Kirkwood.
Monticello	White	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.26	.....	1.30	T.	5	20	7	4	s.	J. E. Loughry.
Moores Hill	Dearborn	.....	9	58.3	.....	88	3	24	29	38	8.73	.....	4.30	0.2	7	24	1	6	nw.	W. S. Bigney.
Mount Vernon	Posey	410	24	60.4	+ 3.2	90	1	27	29†	33	10.50	+ 7.43	4.36	T.	6	25	0	6	n.	Chas. M. Spencer.
Paoli	Orange	611	13	59.2	+ 2.1	88	1	24	29	44	8.48	+ 5.05	4.37	T.	6	20	6	5	sw.	James A. Gillum.
Princeton	Gibson	481	28	59.8	+ 3.9	90	1	24	29	41	6.88	+ 4.43	3.50	T.	3	25	2	4	.....	Elisha Jones.
Richmond	Wayne	972	25	55.4	+ 2.4	86	3	24	30	38	6.72	+ 3.95	4.08	0.9	5	18	7	6	.....	Walter Vossler.
Rochester	Fulton	775	7	55.7	.....	79	3‡	24	29	33	2.71	.....	0.73	7.0	8	17	9	5	.....	G. P. Keith.
Rockville	Parke	722	24	57.6	+ 3.0	82	16‡	23	29	32	3.95	+ 1.53	1.78	T.	7	20	2	9	s.	Dr. W. N. Wirt.
Rome	Perry	370	7	61.9	.....	92	1	27	29†	41	8.52	.....	4.48	T.	8	19	6	6	w.	Adam Anspach.
Salamonia	Jay	.....	5	55.2[f]	.....	85	3	27	29	36[f]	5.02	.....	2.06	0.5	6	17[e]	4[e]	7[e]	sw.	Chas. V. Skinner.
Salem	Washington	717	17	57.8	+ 1.9	88	1	23	30	39	9.05	+ 6.10	4.80	0.5	6	19	3	9	w.	Emmet S. Allen.
Scottsburg	Scott	570	16	59.1	+ 2.1	86	3	28	29	31	8.56	+ 6.01	4.96	0.5	5	21	4	6	n.	Frank H. Park.
Seymour	Jackson	610	23	59.4	+ 3.8	89	17†	22	29	39	6.91	+ 3.93	3.70	T.	5	14	11	6	w.	J. Robt. Blair.
Shelbyville	Shelby	.....	6	57.0	.....	85	3†	23	29	39	6.88	.....	3.05	2.0	5	16	10	5	sw.	Edgar A. Hodson.
Terre Haute	Vigo	498	20	60.6	+ 3.4	85	3†	27	29	30	5.39	+ 3.13	2.18	0.0	5	19	8	4	sw.	Prof. R. G. Gillum.
Veedersburg	Fountain	612	11	58.6	+ 2.0	88	17	22	29	43	3.41	+ 0.92	2.15	T.	7	20	6	5	s.	L. A. Culver, jr.
Vevay	Switzerland	525	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Frederica Boerner.
Vincennes	Knox	431	18	59.0	+ 1.7	89	3	25	29	39	8.80	+ 5.74	3.20	T.	5	23	2	6	s.	Garrett V. List.
Washington	Daviess	484	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Homer B. Turrell.
Whitestown	Boone	.....	2	55.0	.....	84	3	23	29	38	3.54	.....	1.53	T.	5	17	8	6	e.	C. A. Stevenson.
Winona Lake	Kosciusko	.....	3	57.2	.....	86	17	29	30	43	1.85	.....	0.64	4.5	9	12	15	4	w.	Rev. Albert A. Young.
Worthington	Greene	526	28	58.6	+ 3.1	86	3	24	29	34	7.41	+ 4.73	3.90	T.	6	16	11	4	sw.	D. W. Solliday.
Illinois.																			
Albion	Edwards	531	19	59.5	+ 2.7	87	1	25	29	29	7.27	+ 4.93	3.42	0.2	6	22	4	5	s.	B. F. Michels.
Charleston	Coles	720	25	57.8	+ 2.3	84	3	22	29	38	4.53	+ 1.89	3.06	0.1	8	19	7	5	s.	Jacob B. Daisy.
Danville	Vermilion	604	9	59.0	.....	87	16†	23	29	39	2.45	.....	1.48	T.	5	23	1	7	sw.	J. J. Lemon.
Equality	Gallatin	421	12	62.2	+ 2.3	95	1	25	29	36	13.17	+ 2.49	5.47	T.	5	22	6	3	s.	Dr. L. W. Gordon.
Fairfield	Wayne	495	17	59.6	+ 1.5	90	1	24	29	40	7.45	+ 5.08	3.85	T.	6	23	0	8	ne.	Geo. A. Tromly.
Flora	Clay	495	24	59.1	+ 3.5	97	2	23	29	42	7.17	+ 4.74	3.40	T.	5	24	3	4	nw.	Jos. S. Peak.
Golconda	Pope	500	32	60.4	+ 0.8	94	1	25	29	38	15.46	+12.46	7.99	0.0	4	20	2	9	sw.	Dr. D. Lawrence.
Hoopeston	Vermilion	715	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. F. Hoskinson.
McLeansboro	Hamilton	462	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. C. Judd.
Martinsville	Clark	630	22	59.0	+ 3.5	89	1	22	29	43	6.10	+ 4.11	2.50	1.0	6	21	3	7	s.	G. M. Daugherty.
Mount Carmel	Wabash	424	9	59.0	.....	88	1	27	29†	38	8.42	.....	3.10	T.	4	24	0	7	n.	Mrs. H. M. Phillips.
New Burnside	Johnson	556	15	61.7	+ 2.6	94	2	29	30	36	12.48	+ 9.28	5.86	T.	5	20	4	7	e.	Geo. Harris.
Olney	Richland	486	23	60.2	+ 3.7	90	1	25	29	40	6.55	+ 4.27	2.69	0.2	8	18	9	4	n.	Victor E. Phillips.
Palestine	Crawford	500	28	60.6	+ 5.2	88	3	26	29	38	6.64	+ 4.10	3.00	0.5	6	19	2	10	sw.	Duane Shaw.
Paris	Edgar	600	17	56.4	+ 1.7	83	3	23	29	34	3.90	+ 1.74	1.85	T.	6	21	6	4	sw.	H. P. Twyman.
Philo	Champaign	700	26	55.8	+ 2.8	84	3†	20	29	41	2.63	+ 0.50	1.28	T.	4	21	6	4	sw.	H. A. Burr.
Rantoul	....do	768	19	58.4	+ 3.9	87	17	20	29	41	1.45	− 0.35	0.56	T.	5	22	4	5	nw.	Wm. Breiner.
Robinson	Crawford	500	10	60.4	+ 3.1	90	1	25	29	39	4.05	+ 1.30	2.80	0.7	5	19	6	6	sw.	A. P. Woodworth.
Sumner‡	Lawrence	459	4	58.8	.....	84	1†	25	29	37	7.80	.....	3.41	0.0	4	21	6	4	s.	O. A. Fyffe.
Tuscola	Douglas	644	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. W. Lester.
Urbana‡	Champaign	725	8	57.0	.....	83	16†	21	29	38	1.34	.....	0.54	T.	6	14	14	3	sw.	Prof. J. G. Mosier.

[a], [b], [e], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 3, Ohio Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New York.																																	
Allegany	Allegheny					.25	.78	.28															.60	.13		.63	.12	.23	.22	.49	T.		3.73
Bolivar	do					.10	.33	.20															.68	.10					.23				1.64
Franklinville	do	.02				.33	.83	.21															.47	.35	T.	.50	T.	.65	.70	.40	T.		4.46
Olean[1]	do	.07					.10	.88															.65	.08		.40	.20	.11	.30	.47	.01		3.27
Pennsylvania.																																	
Aleppo	Ohio						.60																.85			.05		.22	T.	.08			1.80
Baldwin	Allegheny					.06	.30	.07															1.08			.31	.06	.27	.08	.02	.05		2.30
Beaver Dam[1]	Ohio						T.	.33															.50			.08	.01	T.	.19				1.11
Bradford	Allegheny	.09				.21	.90	.05													.02		.78			.76	.06	.36	.36	.24			3.83
California	Monongahela							.30															.25			.23		.27	T.				1.05
Clarion	Allegheny																																
Claysville	Ohio						.60	.25															.61			.12		.22	.10	.02			1.92
Confluence[1]	Youghiogheny							.16	.12														.64	T.		T.	.06		.42	T.	.08		1.48
Davis Island Dam[1]	Ohio					.05	T.	.45															.72	.01		.12	.14	T.	.10	.02	T.		1.61
Derry Station	Allegheny							.20														1.09				.12		.57					1.98
Franklin	do	.02				.36	.68	.46															.72		.36	.06	.18	.26	.22	.04			3.36
Freeport[1]	do					.05		.60															.90	T.		.14	T.		.32	T.	.02		2.03
Greensboro[1]	Monongahela							.24	.04														.60	.02		T.	.08		.18				1.16
Greensburg	Youghiogheny					.03	.15	.13															.70			.07		.2.	.08	.06			1.44
Greenville	Ohio					.85	1.32	.09															.81	.01		.49	.04	.11	.27	.06	.30		4.35
Grove City	do					.31	.57	.11															.76			.35		.45	.15	.09	.04		2.83
Herrs Island Dam[1]	Allegheny					T.	T.	.44															.73	T.		.08	.22	T.	.11	.04	T.		1.62
Indiana	do						.10	.21															1.05			.32		.20	.01				1.89
Irwin	Monongahela						.17	.35															.80		.11			.19	.06	T.	T.		1.68
Johnstown	Allegheny						.03	.08	.01														.76			.20		.38	.02	.05			1.53
Lock No. 4[1]	Monongahela					T.		.35	T.														.65	.03		T.	T.		.32	T.	T.		1.35
Lycippus	Allegheny					T.		.22															1.48					.20	.10	.04			2.04
Parkers Landing[1]	do					T.	T.	.36															.76		.32		.06	.08	.22	.04	.20		2.04
Pittsburg	Ohio					.01	.56	.01														.40	.38		.02	.21		.06	.04	T.			1.69
Saegerstown	Allegheny	.07				.34	1.30	.22															.85	.10	.08	.76	.05	.22	.45	.75	.04		5.23
Saltsburg[1]	do					.10	.02	.28	.01														.90	.01		.16	.10		.22	.01	.01		1.82
Skidmore	Ohio					.25																						.75	.75	.10			1.85
Somerset	Youghiogheny						T.																1.07			.05		.31	T.	.15			1.58
Springdale[1]	Allegheny					.09		.60															1.06			.17	.14		.11		.03		2.20
Uniontown	Monongahela							.30															.80			T.		.30	.05	.03			1.48
Warren	Allegheny	.06				.70	.64	.26															.36			.90		.50	.40	.10			3.92
West Newton[1]	Youghiogheny					.01	T.	.42															.60	T.		T.	T.	T.	.30	T.	T.		1.35
Maryland.																																	
Deer Park	Youghiogheny							.15	.13														.53			.15		.17	.18				1.31
Grantsville	do							.20	.03														.62			.05		.34	T.	.20			1.44
Oakland	do							.22	.15														.50			.60		.25	T.	.03			1.75
West Virginia.																																	
Bancroft[1]	Great Kanawha							.73	.05	.03													.27						.36	T.	T.		1.44
Beckley	do										.40													.45					.69		.15			1.69
Ben's Run	Ohio						1.05	.17									.61	.05					.69					.42	.05	.01			3.05
Bluefield	Great Kanawha							.75	.20											.17	.09	.20	.30					.40	.10	.30			2.51
Brandonville[1]	Monongahela							.21	.10														.85							.55			1.71
Buckhannon	do							.52	.15									T.					.78			.01	T.	.60	.15	T.	T.		2.31
Cairo	Little Kanawha						.60											.40					.60					.35	.13				2.08
Central Station	Middle Island Creek						T.	.48										.03					.54			T.		.31	.01	.09			1.46
Charleston[1]	Great Kanawha							.30	.02														.35						.95	T.	T.		1.62
Creston[1]	Little Kanawha							.53	.04									.06					.50				T.		.82				1.94
Cuba	Sand Creek						.49	.03															.19			T.		.23	T.	T.			0.94
Davis[1]	Monongahela							.10													.30						.40			.60			1.40
Elizabeth	Little Kanawha							.70	.04									.17					.48			.02		.29	.07	.01			1.78
Elkhorn	Big Sandy						.71	.10										.15				.60				T.		.49	.10	.25			2.40
Elkins	Monongahela						.13	.20	.25												.09		.53			.24		.49	.10	.18			2.21
Fairmont	do							.24	.04														.78				.06		.36	.02	T.		1.50
Glenville[1]	Little Kanawha							.38	T.									.35					.68						.55	T.			1.96
Grafton	Monongahela							.48	.05													1.54				.09		.32	.06	.10			2.64
Green Sulphur Springs	Great Kanawha	.19						.36	.42	.01										T.	.02		.42			.03		.20	.10	.07	.02		1.84
Hinton[1]	do	.06						.24	.16	.12											.02		.52				.06		.14	.08	.02		1.42
Huntington[1]	Ohio							1.00															.44						.32	T.	.08		1.84
Lewisburg	Great Kanawha							.31	.47											.19						T.		.21		T.			1.18
Logan	Guyandotte						T.	.60	.50																	.05		1.15	T.	T.	T.		2.30
Lost Creek	Monongahela						T.	.31	.08									T.			T.		.78			T.		.30	T.	.08			1.55
Madison	Great Kanawha						T.	.50	.06	.30													.33						.56	.10	.30		2.07
Mannington	do							.28	T.														.78			.02		.30	.09	.04			1.51
Marlington	do							.07	1.00														.51					.45	T.	T.			2.03
Morgantown	Monongahela						T.	.40															.88			.06		.38	.03	T.			1.77
Moundsville	Ohio						.40	.70										T.	T.				.59			.07		.27	T.	T.			2.03
New Cumberland	do						.45	.05															.67			.18		.40	T.				1.73
New Martinsville	do						.65	.33															.70					.20	.13	.08			2.09
Nuttallburg	Great Kanawha	.10						.47	.71														.64			.08		.50	.05	.02			2.57
Parkersburg	Ohio						.66	.05									T.					.09	.05			T.		.23	.04	.03			1.15
Parsons	Monongahela							.20	.05													.15				.90			T.				1.50
Philippi	do							.48	.05														.73			.03		.31	.05	.03	T.		1.68
Pickens	do							.35	.44								T.						.79			.05		.73	.46	.14			2.96
Pineville	Guyandotte	.32	.23					T.	.63																								1.18
Point Pleasant[1]	Ohio							.80	.04														.34						.28		T.		1.46
Powellton	Great Kanawha																																
Princeton	do						1.00	.40										.30			.40		.28			.10		.22	.10	.10			2.90
Robertsburg[1]	do							.61	.05														.23						.24	T.	T.		1.13
Rowlesburg[1]	Monongahela							.26	.12	.14													.70			T.	.14		.74	T.	.02		2.12
Ryan	Great Kanawha							.55	T.														.44			T.		.54	T.	T.			1.53
St. Marys[1]	Ohio							1.10	.03									.40						.76					.44	.10			2.83
Smithfield[1]	Fishing Creek						.53	T.										T.	T.				1.01	T.			T.		.39	T.	T.		1.93
Spencer[1]	Little Kanawha							.28	T.														.79				T.		.42		T.		1.49
Sutton	Great Kanawha																																
Terra Alta	Monongahela																																
Union	Great Kanawha							.35	.63												.41		.44						.30	.10			2.23
Valley Fork	do							.59	.05														.55										1.19
Webster Springs	do							.45	.52																								0.97
Wellsburg	Ohio				T.		.85	.09															.66			.13		.18	T.				1.91
Weston[1]	Monongahela							.38										.06					.72				.20	T.	.26	.10	.08		1.80
Wheeling[1]	Ohio					.01		.86										T.					.54	.01			T.		.30	.06	T.		1.78
Williamson[1]	Big Sandy		.16					.48	.18	.02													.20						.52	.04			1.60
Ohio.																																	
Amesville	Ohio						.52	.27															.52			T.		.35	T.	.08			1.74
Bangorville	Muskingum					2.30	3.22	.16									.11	.42			.60		.22			.04		.09	.05				7.21
Bellefontaine[1]	Great Miami				.07	2.65	2.98	.10												T.	.49					T.		.16	T.	T.	T.		6.45
Bladensburg	Muskingum					1.35	2.00	.35									.15	.35					.65			.15		.15	T.				5.15
Cadiz	Ohio					T.	.40	.15									T.	.01			.08		.37		T.	.20		.38	.02	T.			1.61
Cambridge	Muskingum					T.	.55	.32										.45					T.				.31		T.				1.63

TABLE 2.—*Daily precipitation for October, 1910. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Ohio—Cont'd.																																	
Camp Dennison	Ohio				.08	1.03	3.62	.09														.24	.02					.22	.03				5.33
Canal Dover	Muskingum					1.15	.89	.26															.61			.04		.33	.10	T.			3.38
Canton‖	do					1.40	1.80	.06							T.							.28	.33			.14		.26		.01			4.28
Cardington	Scioto				T.	2.00	3.49	.10									.85	.05				.24	.42					.09	.03	T.			7.24
Chillicothe‖	do			.85				.97															.99										2.81
Cincinnati	Ohio				.26	2.33	2.82															.18						.18	.01				5.78
Circleville‖	Scioto					T.	1.00	.77															.65					.13	.04	T.			2.59
Clarington	Ohio						1.20										T.	T.					.52			T.		.30	.06				2.08
Columbus	Scioto					2.84	1.61															.55	.02					.10	.10				5.22
Coshocton‖	Muskingum					.22	1.72	.70										.49					.90		.03			.22					4.28
Dayton‖	Great Miami				.06	3.82	2.78															.36	.02			T.		.04	T.	T.			7.08
Delaware	Scioto				T.	3.87	2.66	.05									.03					.45	.04		T.	T.		.09	.05				7.24
Demos	Ohio				T.	.02	.58	.23									T.	.03					.61			.12		.28	.05				1.92
Dennison	Muskingum					.19	.89	.32															.60			.08		.19	T.	T.			2.27
Frankfort	Scioto						1.10	T.															.65					.15		T.			1.90
Garrettsville	Mahoning	T.				.78	1.27	.20														.03	.71	.01	T.	.55	T.	.05	.08	.03			3.71
Granville‖	Muskingum					1.40	1.75	.21										.06				T.	.80		T.	.01		.45	T.	T.			4.68
Gratiot	do					.27	.72	.24										.38					1.05				.04		.05				2.75
Green	Ohio																																
Green Hill	Muskingum					1.00	1.20	.13										T.					.40		T.	.06		.36	.03	T.			3.18
Greenville	Great Miami				.70	2.50	1.94															.25						.10	.05				5.54
Hillsboro	Scioto					.06	2.18	.05														.33	.31		T.	.02			T.	T.			2.95
Ironton	Ohio						.62	.40															.40					.25					1.67
Jacksonburg	Great Miami				.11	*	7.50														.30							.05	T.				7.96
Kenton	Scioto			.04	.14	2.27	2.86	.10										T.				.19	.02						T.				5.62
Killbuck	Muskingum																																
Lancaster	Ohio					.20	.87	.15														T.						.28	T.	T.			1.50
Lawshe	do																																
McConnelsville	Muskingum					T.	.87										.01	.12				.05	.56			.06		.25	.10	T.			2.02
Marietta	Ohio						.67	.13										.05					.25			.04		.22	T.	.05			1.41
Marion	Scioto				.03	2.75	3.06	.23									1.07					.36						.42	.02				7.94
Milfordton	Muskingum					1.47	2.22	.14									.34	.50					.78			T.		T.	.12				5.57
Milligan	do					.11	.60	.32										.10					.98			.22		.26	.10	.14			2.83
Millport	Ohio				T.	.66	.68	.20															.38			.15		.28	.02	T.			2.37
Nellie	Muskingum					1.50	1.50	.10									.25						.91					.34					4.60
New Alexandria	Ohio					T.	1.50	T.															.65		.40	T.		T.	T.				2.55
New Berlin	Muskingum																																
New Waterford	Ohio					*	*	1.00															.90			.22		.36	.10				2.58
Ohio State University	Scioto					2.15	2.22	.04														.58	T.					.14	.03	T.			5.16
Pataskala	Muskingum					1.43	1.80	.14														.43	.38			.05		.34	.09	T.			4.66
Philo (1)	do					T.	.58	.32										.33					.62			.03		.26	.05	T.			2.19
Piqua‖	Great Miami					2.80	1.84	2.20															.22				.03		T.				7.09
Plattsburg	do				T.	3.00	3.72															.32				T.		T.	T.	T.			7.04
Pomeroy	Ohio																																
Portsmouth‖	do							1.21															.50				.18	.10	T.	T.			1.99
Prospect‖	Scioto					1.02	3.14	1.18										T.						.35					.20	T.			5.89
Rittman	Muskingum				T.	1.35	2.10																.53			.10		.10	T.	T.			4.18
Shenandoah	do				T.	1.63	2.04										.10						.72			T.		.16	.04				4.69
Sidney	Great Miami				.27	3.25	2.46															.25					T.	.02	T.				6.25
Somerset‖	Muskingum					.08	.48	.67										.13					1.10		T.		.04	.30	.08	.05			2.93
Springfield	Great Miami				T.	2.93	3.24	.02														.35	.04			T.		.13		.03			6.74
Summerfield	Ohio					.19		.13									.07	.22					.24			.06		.29	.07	T.			1.27
Thurman	do						.50	.30															.50			T.		.29	T.	T.			1.59
Urbana	Great Miami					2.80	3.50	.10														.23				.02			.02				6.67
Warren	Mahoning	.05				.85	1.27	.06		T.													.67		T.	.28		.11	.06	.10			3.45
Waverly‖	Scioto						.63	.41										T.	T.				.87			.01	.11	.38	.01	T.			2.42
Waynesville	Great Miami					3.30	4.38															.21					.05	.08	.01				8.03
Wooster	Muskingum					1.50	2.35	.07									T.					.30	.60		T.	.09		.08	.25	T.			5.24
Youngstown‖	Mahoning					.24	1.87	.62															.43			.14		.24	.11	.10			3.75
Zanesville‖	Muskingum					.12	.35	.61										.15					.80				T.	.05	.10	.02	T.		2.20
Virginia.																																	
Big Stone Gap	Tennessee						T.	.32															.40					.48	T.	.10			1.30
Blacksburg	Kanawha					.01		.82	1.20									.10					.54	.07		.27		.16		.03			3.21
Burkes Garden	Tennessee							.73	.30														.32			.50		.30	T.	.40			2.50
Elk Knob	do	T.	.98				.04	.31		.02													.48	.02				.39		.06			2.30
Galax	Kanawha					.40	1.92	1.40															.20	.10				T.	T.				4.02
Ivanhoe‖	do	.20	.01	.03	.03	T.	.09	1.28	1.05	.38	T.		T.				T.		.10	T.	.45	T.	.18					T.	T.	.18	.06	.01		4.05
Lebanon	do		.25				.55	.02															.57					.26		.25			1.20
Marion	Tennessee							.65	.28														.47					.30		.30			2.30
Max Meadows	Kanawha					.03	.10	.85	.56										T.				.46			.30		.05	.18		T.			2.53
Mendota‖	Tennessee																																
Radford‖	Kanawha	T.						.34	1.02	.94									T.				.30				T.		.30	T.			2.70
Speers Ferry‖	Tennessee	.20						.32	.10														.08						.54	.10			1.34
Wytheville	Kanawha					.02	.11	.84	.56									.44	.01	.45			.29			.04		.17	T.	.01			2.94
North Carolina.																																	
Altapass‖	Tennessee																																
Andrews	do							.41	.17														.10					.71		.04			1.43
Asheville	do					.02	.67	1.28	.44										T.		.08	.01						.14	T.	T.			2.64
Banners Elk	do				.10	.05	.20	.57	.64									.19			.41	.17	.08						.10	.40			2.91
Brevard	do				.04	.04	.18	1.26	.79												.37							.20					2.88
Bryson City‖	do						.05	.10	.11	.22													.11						.31	.03			0.93
Cullowhee	do					T.	.02	1.63	.55	T.																		.23		.04			2.47
Hendersonville	do																																
Highlands	do			T.		.15	1.05	2.39	1.34							T.														.05			4.98
Hot Springs	do							.49	.22												.14		.20			T.		.42	T.	T.			1.47
Jefferson	Great Kanawha				T.	T.	.12	1.75	.86												T.	1.06				T.		.25	.07	.02			4.13
Marshall	Tennessee							.72	.30										.07	.05		.05							T.	.02			1.21
Murphy‖	do					.10		.98	.14	.20													.10							.05			1.57
Rock House	Savannah				.03	.06	.67	1.74	.48							.05						.10		.02				.33	.05				3.53
Waynesville‖	Tennesse	.25	.02	T.			.01	.88	.54	.06	T.																		.06	.25			2.07
Georgia.																																	
Diamond	Tennessee				T.	.20	.10	1.22	.45													.03						.61	T.	.03			2.64
Lafayette	do						.80	.60	.18													1.07	T.		.73				.47				3.85
Alabama.																																	
Bridgeport	Tennessee							2.00	.05	.16					.30													10	.90	.03			3.24
Decatur	do	.05				T.	.01	2.02		T.					1.20								.02					.40	.61	T.			4.31
Florence	do						.60	.48							1.62	.14							.10					.62	.04				3.60
Guntersville	do	T.			T.		T.	1.58	.02	.20					1.20	.14							T					.04	.80				3.98
Madison	do				T.		2.60		T.					.60	.30							.05						1.05	T.				4.60
Riverton	do					T.	1.08	.42	.04						.25	.36							.34						.76	T.				3.28
Scottsboro	do					.05	1.20	T.	.13	.04				30	1.00							.06							.57	T.				3.35
Tuscumbia	do					.04	.65	.46							1.35														.89	.09	T.			3.48
Tennessee.																																	
Ashwood	Tennessee					1.30	.15	.60						.20								.25						.23	T.				2.73

TABLE 2.—*Daily precipitation for October, 1910. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
***Tennessee*—Cont'd.**																															
Benton	Tennessee						.05	.55	.76													.10						.58	T.				2.04
Bird's Bridge‖	do	.17						.58	.11													.42							.57	.05			1.90
Bluff City‖	do							.64													T.		.84						.68	T.			2.16
Byrdstown	Cumberland						1.80															.50						.40	T.				2.70
Carthage‖	do						.72	1.55	.02						.39								.20					.40	.04	.08			3.40
Cedar Hill	do																																
Celina‖	Cumberland						.63	1.63							.39								.23					.26	.20				3.34
Center Point	Tennessee			.15	.10	.12	T.	2.00							.59							.05					.08		T.				3.09
Charleston‖	do						.15	.84	.07	T.					T.								.03				T.	.10		T.			1.21
Chattanooga	do				.09		1.20	.05	.27						.05							.02						.61					2.29
Clarksville	Cumberland				.63	.81	2.25							.38	.02							.22						.22	T.				4.58
Clinton‖	Tennessee						T.		.55	T.													.10						.40	T.			1.05
Dandridge‖	do	.80						.80														.28							.44				2.32
Decatur	do				T.	T.	.37	.78	.04													.05	.08					.47	.01				1.80
Dickson	Cumberland					.80	1.40	.04							.84	.09						.23							T.				3.40
Dover	do		T.	T.	.60	1.60	4.07								T.														T.				6.27
Dunlap	Tennessee	.01					1.22	.14	.10						.18	.01						.04						.48	.03				2.21
Elizabethton‖	do							.72														.40	.40					T.					1.52
Erasmus	Cumberland				T.	T.	1.51	.67	T.						.14							.15					.65	.05	.02	T.			3.19
Florence	do				T.		1.65	.40						.09	.09							.18						.38	T.				2.79
Franklin	do					T.	1.10	.87							.26								.29					.04	T.	.06			2.62
Hall's Hill‖	do						.47	1.77	T.						.28	1.03							.15					.58	.05	T.			4.33
Harriman	Tennessee					T.	1.48	T.							T.	T.												.51	T.				1.99
Hohenwald	do				.06		1.25							.82								.23						.35	T.				2.71
Iron City	do				T.		1.78		T.					1.75	.40							.32						.36	T.				4.61
Jefferson City	do							.50	.06													.17						.44	T.				1.17
Johnson City‖	do	.03					.68	.09	T.									T.		.21		.49						.63	.02	T.			2.15
Johnsonville	do				.32	1.02	2.38							.46								.12						.04	T.				4.34
Jonesboro	do																																
Kingston‖	do						T.	.69	.03						T.	T.							.15					T.	.30	T.			1.17
Knoxville	do					T.	.28	.14	.02													.68						.56	T.	T.			1.68
Lebanon	Cumberland				T.		1.76	.40	.02					.60	.08							.38							.02				3.26
Lewisburg	Tennessee					T.	1.93	.22	.09					.85	.03							.16						.52	T.				3.80
Livingston	Cumberland																																
Loudon‖	Tennessee							.63	.06														.18					T.	.37	.01			1.25
Lynnville	do						2.13	.10						.31	.04							.13						.52	T.				3.23
McGhee‖	do							.52	.05	.02													.32						.45				1.36
McMinnville	Cumberland					T.	1.57	.23	.02					10	1.90							.12	.04					.64	.05				4.67
Maryville	Tennessee																																
Mountain City	do							.72	.39												.38		.33					.54	.05	.01			2.42
Nashville	Cumberland				T.	T.	2.41							.28	.04							.22						.25	T.				3.20
Newport	Tennessee							1.30															.50					.50		T.			2.20
New River‖	Cumberland							3.05															.20					.25					3.50
Palmetto	Tennessee						1.65	.35	.02					.14	.06							.14						.43	T.				2.79
Pinewood	do				.43	.06	1.60	.03						.65								.30						.04	T.				3.11
Pope	do				.90		*	*	2.50				.55	T.					.40										T.				4.35
Rogersville‖	do	.24						.46	.04														.18					T.	.54	T.			1.46
Rugby	Cumberland						1.45	.70														.28						.78	.03				3.24
Savannah	Tennessee				T.	T.	2.35								T.							.50					.30	.35	.01				3.51
Sevierville	do							.86															.18					.54	T.				1.58
Sewanee	do						*	2.65						.87								.19						.75	T.				4.46
Sparta	Cumberland				T.		1.25	.15	T.					T.	2.15							.02						.50	T.	.05			4.22
Springdale	Tennessee																																
Springville	do				.22	1.19	4.54		.01					.50	.55							.15	.01					.06	T.				7.23
Tazewell‖	do							.40	T.														.66						.32	.01			1.39
Tullahoma	do				T.		1.85	.18	.08					1.01	.54							.09						.52	.01				4.28
Walling‖	Cumberland	.01						1.90	.02						.30	.60							.10					.03	.52				3.48
Waynesboro	Tennessee				.06		1.34							98							T.	.30						.50	T.				3.18
Wildersville	Cumberland					1.50	2.80							.40	T.							.15						.21	T.				5.06
Worsham‖	do						3.55								.44								.30					.26	T.				4.55
Yukon	do						2.50	.27	.20					.15	.56					T.								.70	T.				4.38
Kentucky.																																	
Alpha	Cumberland						2.10								T.							.52						.78	T.				3.40
Anchorage	Ohio				.91	1.70	3.38															.35							.03				6.37
Bardstown‖	Salt						.30	1.74	1.12														.25					.21		T.			3.60
Beattyville‖	Kentucky							1.56	T.						.12								.16					.14	.10	.06	.02		2.16
Beaverdam‖	Green						4.30	.50							.14					T.	T.		.29					T.		T.			5.23
Berea	Kentucky						1.00	.58							T.							.42	.27					.36	T.	.04			2.67
Bowling Green‖	Green					.50	1.50	.75							.03							.10	.20					.10		.02			3.20
Burnside‖	Cumberland						T.	1.78								T.							.18					.13	.30	T.			2.42
Cadiz	do			.17	.77	.08	.74							.42								.33							T.				9.71
Calhoun	Green			T.	1.37	3.88	4.82							.12	.06							.33	.01					.04	T.				10.61
Catlettsburg‖	Big Sandy							.98	T.														.28				.04	.02	.30	T.			1.62
Earlington‖	Green			.07		1.06	5.60	.15							.30							T.	.32							.01			7.51
Edmonton	do				T.		1.82	.52							.09							.39						.28	.08				3.18
Eubank‖	Cumberland	.02						.04	1.94														.59					.51		.01			3.11
Falmouth‖	Licking						.06	1.24	.90														.33					.15		T.			2.68
Farmers	do					T.	1.00	.50							T.							T.	.63					.35	T.	.05			2.53
Frankfort‖	Kentucky		.11			.26	1.19	1.51															.20					.11	T.				3.38
Franklin	Green				.07	1.03	2.46							.07								.30						.21	T.				4.14
Greensburg‖	do						.75	1.25							.05								.52					.25	.11	.03			2.96
High Bridge‖	Kentucky					.06	.32	1.06															.21					.10	.05	.03			1.90
Hopkinsville‖	Cumberland				1.00	1.20	3.85							.30								.25						.25	T.				6.85
Irvington	Ohio				1.20	1.25	2.90															.22							T.	T.			5.57
Leitchfield	Green				.34	.71	2.14															.31						.35	.03				3.88
Lexington	Kentucky	.06			T.	.01	1.07															.26						.22	.05				1.67
Loretto	Salt					.20	2.02	.28														.25						.22	T.				2.97
Louisville	Ohio				.98	3.07	2.31															.28						.03	.03				6.70
Marion	do			T.	1.75	4.92	2.78							T.								T.							T.				9.45
Maysville‖	do					T.	.08	1.14															.58					.27	.07	.04	T.		2.18
Middlesboro	Cumberland						.26	.34															.23					.37		.02			1.22
Mount Sterling‖	Licking	.54					T.	1.31															.32					T.	.04	T.			2.21
Owensboro‖	Ohio				.20	2.62	5.31	.33							.40					T.	T.	.36								T.			9.22
Owenton	Kentucky						4.05															.38					.15		T.				4.58
Paducah‖	Ohio				1.90	2.00	5.00	.12							T.	.10						T.	.10							T.			9.22
Pikeville‖	Big Sandy	.68						.55	.40														.44					.12	.34	T.			2.54
Richmond‖	Kentucky	.06				T.	.20	1.30							.05								.48					.20	.15	T.			2.44
St. John‖	Salt					.20	2.43	.83	T.														.26					.24		.08			4.04
Scott	Licking				.25	1.00	3.32	.08														.26						.12	.03				5.06
Shelby City	Kentucky						1.00	.52							.01							.22	.11					.26		.02			2.14
Shelbyville‖	Salt	.28				.12	2.08	1.02															.30					.12		T.			3.92
Taylorsville	do				.11	.05	2.47	.18													T.	.30						.14	T.	.09			3.34
Williamsburg‖	Cumberland							1.93	.08																			.06	.32	T.			2.39
Williamstown‖	Licking					.11	1.94	.94														.28						.20	T.				3.47

TABLE 2.—*Daily precipitation for October, 1910. District No. 3*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Indiana.																																	
Anderson	West Fork, White				1.05	1.84	1.71															.36			T.			.21	.04				5.21
Bloomington	do				.70	4.00	4.02	.08														.05	.35			T.		.08		.03			9.31
Bluffton	Wabash				.41	.34	1.23															.29						.07	.03				2.37
Butlerville	East Fork, White				.30	4.88	3.38															.33						.22	.17				9.28
Cambridge City	Whitewater				T.	1.82	2.96	.56															.28					.08	.06	.05			5.81
Columbus	East Fork, White				.14	4.12	4.00	.24															.33					.08					8.91
Connersville	Whitewater				.88	4.29	1.85															.30	T.					.07	.05				7.44
Delphi	Wabash				.89	.02	.10	.07														.28	.42					.10					1.88
Eminence	West Fork, White				1.41	2.40	.99	T.														.71							T.				5.51
Evansville	Ohio		T.	.17	3.66	6.50	.55														.01	.30						T.	T.				11.19
Farmersburg	Wabash			.05	2.10	1.99	.57															.50						.20		.02			5.43
Farmland	West Fork, White				.74	1.39	2.00	.56															.39				T.	.34		.02			5.44
Greenfield	East Fork, White				1.55	2.18	2.80															.35			T.			.10	.10				7.08
Greensburg	do				.87	4.02	1.82															.41						T.	.18				7.30
Huntingburg	Wabash				3.70	4.45	2.15																										10.30
Huntington	do			.05	.50	.03	.65															.48	T.			T.			T.	.10			1.81
Indianapolis	West Fork, White			.01	.97	2.93	.77															.45	.01		T.			.17	.01				5.32
Jeffersonville	Ohio				.75	2.25	3.37															.32						.04	.04				6.77
Judyville	Wabash			.20	1.37	.10	.30															.43	.01		T.			.02		T.			2.43
Kokomo	do				1.02	.59	.51															.45						.05	.08				2.70
Lafayette	do				1.64	.04	.13	.07						.01							T.	.31	.32					.06	T.				2.58
Logansport	do				.78	.27	.24	.11														.09	.66					.12					2.27
Madison	Ohio				.54	2.43	4.86															.26						.19	.10				8.38
Marengo	do	T.			.41	4.00	.89							.18								.40						.10	T.				5.98
Marion	Wabash			.23	.59	.54	.51															.50				.02		.12	.08	T.			2.62
Markle	do			.10	.50	T.	1.30															2.00				T.			.10				4.00
Mauzy	East Fork, White				1.27	2.69	1.65															.36	.03					.04	.07				7.41
Monticello	Wabash			1.30	.15	.13	.09														T.	.59							T.				2.26
Moores Hill	Ohio				.09	4.03	4.30	.01														.21						.07	.02				8.73
Mount Vernon	do				2.36	3.32	4.36	.10							T.							.10	.26							T.			10.50
Paoli	East Fork, White				1.95	4.37	1.80															.29						.01	.01				8.48
Princeton	Wabash				2.83	3.50																.55							T.				6.88
Richmond	Whitewater				.80	4.08	1.52														T.	.23						T.	.09				3.72
Rochester	Wabash			.28	.60	.04	.14															.73						.04	.18	.70			2.71
Rockville	do			.19	1.78	.95	.25															.76	.01					.01	T.				3.95
Rome	Ohio				.55	2.60	4.48	.01		T.			T.		.04	T.	T.	T.	T.	T.		.37	T.	T.	T.			.04	T.		.03		8.52
Salamonia	Wabash				.56	1.74	2.06															.37	T.					.22	.07				5.02
Salem	Ohio	T.			1.10	4.80	2.57															.45						.07	.06				8.05
Scottsburg	East Fork, White				.33	4.96	2.90															.29							.05				8.56
Seymour	do				.92	3.70	1.88															.39							.02				6.91
Shelbyville	do				1.77	3.05	1.53															.35						.18					6.88
Terre Haute	Wabash			.01	2.04	2.18	.54															.62							T.				5.39
Veedersburg	do			T.	2.15	.40	.28														T.	.44	.05					.08	.01				3.41
Vevay	Ohio																																
Vincennes	Wabash				2.80	2.00	3.20	T.														T.	.60					T.		.20			8.80
Washington	West Fork, White																																
Whitestown	do				1.02	.35	1.53	.02														.62							T.				3.54
Winona Lake	Wabash			.06	.41	.10	.21															.64	.02		T.			.04	.14	.23			1.85
Worthington	West Fork, White				1.71	3.90	.75							T.								.49						.52	.04				7.41
Illinois.																																	
Albion	Wabash				3.42	2.22	1.23															.35						.03	.02				7.27
Charleston	do			1.23	1.83	.79	.19														.11	.35						.02	.01				4.53
Danville	do				1.48	.20	.27														T.	.47	.03					T.	T.				2.45
Equality	Ohio				5.24	5.47	2.04							.12								.30							T.				13.17
Fairfield	Wabash			.17	3.85	1.79	1.31															.30						.03	T.				7.45
Flora	do			.19	3.40	2.50	.85															.23						T.	T.				7.17
Golconda	Ohio				4.95	7.99	2.24								T.							.28											15.46
Hoopeston	Wabash																																
McLeansboro	Ohio																																
Martinsville	Wabash			.40	2.00	2.50	.60															.50							.10				6.10
Mt. Carmel	do				3.10	2.06	2.76	T.														T.	.50					T.		T.			8.42
New Burnside	Ohio			T.	.11	4.86	5.85	1.37							T.								.28							T.			12.48
Olney	Wabash		.03	.42	2.69	2.40	.52														T.	.39		.08				.02				6.55
Palestine	do			T.	3.00	2.40	.81															.37						.03	.03				6.64
Paris	do				.25	1.85	1.35	.10														.25	.10							T.			3.90
Philo	do			1.28		.50	.23															.62							T.				2.63
Rantoul	do			T.	.56	.12	.32														T.	.40						.05	T.				1.45
Robinson	do			.38	2.44	.56																	.62						.07				1.05
Sumner	do			T.	3.41	3.11	.87															.41											7.80
Tuscola	do																																
Urbana	do			.01	.46	.35	.19														.05	.28					T.		T.				1.34

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 3, Ohio Valley.*

Date.	Pennsylvania.				West Virginia.								Ohio.									
	Greenville.		Pittsburg.		Charleston.		Elkhorn.		Elkins.		Glenville.		Huntington.‖		Morgantown.		Parkersburg.		Wheeling.‖		Canton.‖	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	77	51	79	58	83	60	78	53	79	57	86	55	78	57	82	51	86	58	76	51	78	46
2	68	38	66	46	64	54	65	46	65	43	68	42	64	44	66	38	68	44	65	43	65	39
3	72	46	72	49	74	55	72	55	70	46	69	43	72	46	72	46	72	46	72	46	72	45
4	78	53	80	56	85	62	82	57	83	57	86	57	84	57	84	57	84	57	84	57	84	57
5	71	46	73	49	78	57	76	55	76	55	78	55	76	55	76	55	76	55	76	55	76	55
6	69	41	71	46	76	55	74	53	74	53	76	53	74	53	74	53	74	53	74	53	74	53
7	68	41	70	46	74	53	72	51	72	51	74	51	72	51	72	51	72	51	72	51	72	51
8	68	41	70	46	74	53	72	51	72	51	74	51	72	51	72	51	72	51	72	51	72	51
9	68	41	70	46	74	53	72	51	72	51	74	51	72	51	72	51	72	51	72	51	72	51
10	63	41	62	45	69	44	66	46	66	46	68	46	66	46	66	46	66	46	66	46	66	46
11	75	35	73	45	73	45	73	46	73	46	76	46	73	46	73	46	73	46	73	46	73	46
12	69	36	69	45	76	44	74	44	74	44	79	44	74	44	74	44	74	44	74	44	74	44
13	68	33	68	41	78	45	76	45	76	45	81	45	76	45	76	45	76	45	76	45	76	45
14	71	46	73	46	82	56	80	56	80	56	83	56	80	56	80	56	80	56	80	56	80	56
15	72	46	73	46	82	56	80	56	80	56	83	56	80	56	80	56	80	56	80	56	80	56
16	74	46	76	46	82	56	80	56	80	56	83	56	80	56	80	56	80	56	80	56	80	56
17	72	46	73	46	82	56	80	56	80	56	83	56	80	56	80	56	80	56	80	56	80	56
18	72	46	73	46	82	56	80	56	80	56	83	56	80	56	80	56	80	56	80	56	80	56
19	72	46	73	46	82	56	80	56	80	56	83	56	80	56	80	56	80	56	80	56	80	56
20	68	46	68	46	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56
21	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
22	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
23	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
24	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
25	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
26	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
27	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
28	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
29	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
30	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
31	78	46	78	46	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
Mns	66.4	39.9	67.1	46.1	72.5	50.0	69.8	45.5	68.0	43.6	73.9	44.7	72.3	46.6	70.4	48.8	71.1	48.2	71.5	43.9	65.8	45.5

Date.	Ohio.										Tennessee.											
	Marion.		Waverly.‖		Big Stone Gap.		Wytheville.		Asheville, N. C.		Decatur, Ala.‖		Chattanooga.		Jonesboro.		Knoxville.		Nashville.		Palmetto.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	79	57	86	46	86	55	80	52	77	54	86	60	82	53	.....	.....	85	57	89	56	91	57
2	77	56	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
3	73	46	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
4	71	46	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
5	76	46	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
6	76	46	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
7	76	46	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
8	76	46	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
9	76	46	84	46	84	54	78	52	76	54	84	60	80	53	.....	.....	83	56	87	55	89	56
10	66	46	68	46	68	56	68	56	68	56	68	56	68	56	.....	.....	68	56	68	56	68	56
11	73	46	78	46	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
12	74	46	78	46	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
13	76	46	78	46	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
14	80	56	83	56	83	56	83	56	83	56	83	56	83	56	.....	.....	83	56	83	56	83	56
15	80	56	83	56	83	56	83	56	83	56	83	56	83	56	.....	.....	83	56	83	56	83	56
16	80	56	83	56	83	56	83	56	83	56	83	56	83	56	.....	.....	83	56	83	56	83	56
17	80	56	83	56	83	56	83	56	83	56	83	56	83	56	.....	.....	83	56	83	56	83	56
18	80	56	83	56	83	56	83	56	83	56	83	56	83	56	.....	.....	83	56	83	56	83	56
19	80	56	83	56	83	56	83	56	83	56	83	56	83	56	.....	.....	83	56	83	56	83	56
20	68	56	68	56	68	56	68	56	68	56	68	56	68	56	.....	.....	68	56	68	56	68	56
21	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
22	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
23	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
24	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
25	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
26	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
27	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
28	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
29	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
30	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
31	78	56	78	56	78	56	78	56	78	56	78	56	78	56	.....	.....	78	56	78	56	78	56
Mns	70.2	45.1	75.3	45.4	70.3	47.4	69.8	46.6	68.0	47.7	77.3	52.5	74.3	53.4	.....	.....	73.2	50.9	74.5	51.6	70.7	49.5

Date.	Tennessee.												Virginia.									
	Sparta.		Waynesboro.		Beattyville, Ky.‖		Big Stone Gap.		Bluefield.		Burkes Garden.		Charlottesville.		Cobbs Knob.		Danville.		Dublin.		Fredericksburg.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	88	56	88	54	88	54	86	54	84	54	80	52	84	54	80	52	86	54	86	54	86	54
2	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
3	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
4	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
5	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
6	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
7	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
8	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
9	86	54	86	52	86	52	84	52	82	52	78	50	82	52	78	50	84	52	84	52	84	52
10	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56
11	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
12	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
13	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
14	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56
15	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56
16	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56
17	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56
18	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56
19	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56	83	56
20	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56	68	56
21	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
22	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
23	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
24	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
25	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
26	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
27	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
28	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
29	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
30	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
31	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56	78	56
Mns	77.4	48.5	75.5	48.7	75.5	43.6	75.5	48.7	75.5	48.7	75.5	48.7	75.5	48.7	75.5	48.7	75.5	48.7	75.5	48.7	75.5	48.7

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 3*—Continued.

Date.	Kentucky.														Indiana.												Ohio.	
	Bowling Green.		Earlington.		Greensburg.		Lexington.		Louisville.		Maysville.		Williamsburg.		Butlerville.		Evansville.		Indianapolis.		Kokomo.		Rockville.		Worthington.		Philo, Ill.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	90	57	94	55	78	53	83	63	89	65	90	52	89	56	89	49	90	64	81	55	76	60	78	59	85	59	78	56
2...	92	58	95	59	90	54	76	55	82	59	83	52	91	57	80	48	88	60	76	50	75	41	78	50	80	52	79	45
3...	91	59	89	67	90	58	84	63	89	64	92	51	88	59	88	62	85	68	84	62	84	59	81	64	86	64	84	60
4...	91	65	79	72	81	59	80	66	80	68	87	52	85	61	77	65	72	63	73	53	78	59	72	53	78	54	74	64
5...	83	67	75	67	79	67	79	67	74	66	85	66	85	63	72	65	72	64	69	55	71	66	71	55	71	67	72	56
6...	63	62	56	55	67	52	74	50	67	52	74	66	75	71	66	50	64	50	65	46	67	52	66	48	68	53	62	45
7...	37	44	68	43	69	46	60	46	63	46	69	47	56	50	65	40	63	45	61	42	61	34	62	38	62	40	63	36
8...	75	45	75	44	70	43	66	46	71	47	74	43	67	50	64	39	69	47	69	43	71	34	68	41	68	42	71	37
9...	79	45	81	42	75	40	70	50	73	49	77	42	75	48	73	42	73	53	67	48	63	34	66	41	72	43	66	43
10...	76	44	75	42	70	38	63	43	36	47	71	39	71	43	68	42	67	49	66	43	67	34	67	42	67	45	68	40
11...	77	43	82	41	80	36	75	46	77	47	83	40	82	44	78	39	77	49	74	48	73	38	73	44	74	42	75	37
12...	88	46	85	42	82	36	79	54	81	51	83	42	85	48	80	42	80	52	78	50	78	38	76	44	77	43	79	40
13...	80	49	86	47	87	47	80	54	84	55	86	44	83	58	82	52	83	56	79	50	80	38	79	52	80	52	79	51
14...	82	60	81	52	77	50	76	63	79	64	82	47	78	55	79	59	78	52	78	61	76	39	75	52	76	60	82	48
15...	84	57	86	56	83	54	78	30	82	59	85	52	83	58	83	57	82	60	81	59	74	58	80	56	83	55	82	51
16...	86	55	88	55	84	53	80	61	86	62	87	53	84	55	87	60	85	62	84	58	81	54	82	56	83	54	84	49
17...	86	54	89	53	85	50	81	64	85	60	88	54	85	54	87	56	82	60	83	61	81	54	82	59	83	55	84	51
18...	86	54	90	54	85	50	81	64	86	59	88	54	85	55	85	54	85	61	82	61	84	53	82	59	82	56	83	49
19...	85	54	90	54	82	43	79	58	81	50	87	48	85	48	82	57	84	62	81	61	82	53	82	60	83	55	83	52
20...	63	54	60	54	65	46	67	57	63	58	82	50	84	51	70	53	62	53	62	54	69	52	68	51	64	53	65	49
21...	64	56	54	52	76	52	77	46	62	48	84	54	83	56	63	48	54	46	57	43	59	46	56	42	60	47	50	42
22...	65	40	65	39	64	38	56	43	61	43	62	45	62	48	59	41	60	41	56	42	57	42	56	40	58	38	57	35
23...	70	35	72	34	64	29	61	40	66	42	66	34	68	40	65	32	66	45	60	38	59	34	60	35	62	34	63	29
24...	72	35	76	37	76	30	64	40	68	43	70	35	72	34	67	38	72	48	66	44	67	42	68	42	68	35	70	37
25...	73	45	70	44	64	31	62	47	65	51	66	36	68	41	65	44	36	50	61	48	61	43	61	44	65	44	62	37
26...	78	47	80	37	75	31	60	42	74	45	73	35	78	38	71	38	77	47	71	43	70	40	71	39	73	39	75	34
27...	30	50	58	50	58	32	55	35	67	40	57	36	65	35	68	43	68	39	67	35	68	41	36	38	68	43	57	34
28...	40	30	42	32	45	28	39	30	41	33	46	31	45	28	43	28	40	33	40	30	42	30	41	30	44	30	40	29
29...	47	26	48	25	47	25	39	25	44	30	47	31	46	28	47	22	45	29	43	26	41	23	42	23	44	24	42	20
30...	59	22	62	25	58	19	53	26	57	30	57	24	57	20	58	28	58	33	56	31	56	28	59	30	58	28	60	27
31...	66	39	69	41	67	19	62	36	65	43	66	28	60	27	64	37	63	42	62	42	62	35	62	37	62	35	60	29
Mns	74.9	48.3	74.8	47.4	73.3	42.7	69.6	49.7	71.9	51.2	75.7	44.6	74.8	47.7	71.8	46.1	71.3	51.4	68.8	48.5	68.9	43.7	68.7	46.6	70.5	46.8	69.3	42.3

Climatological Data for October, 1910.

DISTRICT No. 4, LAKE REGION.

Prof. HENRY J. COX, District Editor.
D. CUTHBERTSON, Forecast Official, temporarily in charge.

GENERAL SUMMARY.

The month of October, 1910, in Climatological District No. 4 was generally warm and pleasant, and, as a whole, quite favorable for outdoor work. The mean temperature ranged higher than that of the same month of 1909 by about 2° in the Vermont section, increasing westward to a difference of more than 8° in the extreme southwestern portions of the district. The absolute maximum temperatures recorded were, as a rule, from 4° to 8° above those for October of the previous year, except in the regions of New York and Vermont, where they fell below by from 2° to 4°. The precipitation in October, 1909, was considerably less than that of the present month over most portions of the district east of the sections around the western end of Lake Superior.

The high temperatures of the first 25 days of the month delayed the first falls of snow in the northern and western portions of the district to dates much later than the average, and this was true also of the damaging and killing frosts. The continuation of abnormally warm weather over the southern and western portions during this period resulted in unusual conditions in the growth of certain kinds of vegetation. Along the western shore of southern Lake Michigan many of the hardier plants were still in flower at the close of the month; while in northern Ohio lilacs were reported to be in bloom, and in a number of places a second crop of strawberries was gathered. Mr. W. S. Currier, in charge of the Toledo office of the Weather Bureau, reports that from the 20th until near the close of the month home-grown strawberries were for sale in limited quantities, and that one grower had sold a quantity of 3 bushels or more. Reference was made in the September report to a second crop of strawberries grown in the vicinity of Sandusky, Ohio.

The following table of averages summarizes the main features of meteorological interest in the various portions of the district:

Portions of States lying within District No. 4.	Mean.					Number of days.				
	Temperature.	Departure from normal.	Precipitation.	Departure from normal.	Snowfall.	.01 inch or more precipitation.	Clear.	Partly cloudy.	Cloudy.	Prevailing wind direction.
	°	°	*Inches.*	*Inches.*	*Ins.*	*Ins.*				
Minnesota	46.2	+ 3.3	1.09	− 1.97	0.3	5	15	9	7	sw.
Wisconsin	52.4	+ 3.3	1.43	— 0.99	0.1	6	16	8	7	sw.
Illinois	58.6	+ 5.4	1.79	− 0.76	T.	7	14	12	5	sw.
Indiana	55.7	+ 2.4	2.41	− 0.07	3.0	7	18	4	9	sw.
Upper Michigan	47.8	+ 3.5	2.80	— 0.18	4.5	9	14	5	12	w.
Lower Michigan	52.8	+ 3.0	2.30	− 0.22	1.8	7	14	7	10	sw.
Ohio	55.6	+ 3.1	4.29	+ 1.89	0.4	7	17	6	8	sw.
Pennsylvania	54.8	+ 2.1	5.00	+ 1.28	4.3	9	9	13	9	s.
New York	50.0	+ 1.6	3.34	− 0.05	1.2	10	12	9	10	nw.
Vermont	47.6	+ 1.1	2.76	+ 0.02	1.2	14	7	10	14	s.

There was a decided excess of clear, sunshiny weather over the southern and western portions of the district, reaching an average of more than 16 days throughout northern Ohio, northern Indiana, and the southwestern shore of Lake Michigan. The amount of cloudiness increased from this area northeastward to an average of 14 days over the Lake Champlain watershed. The regions of abundant sunshine and those of high mean temperature were coincident to a marked degree, as were the areas of greatest cloudiness and heaviest precipitation. It is remarkable also that the lines connecting places having 10 clear days, 10 cloudy days, and 10 days with .01 inch or more of precipitation followed the same general path, describing an arc through Upper Michigan, northern Lower Michigan, Lake Erie, and central New York State.

TEMPERATURE.

The mean temperature for the month was above normal throughout the entire district, the average excess increasing from about 1° in the extreme eastern to nearly 4° in the northwestern sections. The greatest excess occurring at any station of long record was 5.4° at Chicago, Ill. Only two stations, both in New York State, reported deficiencies in mean temperature: Moira, −1.5°, Ogdensburg, −0.4°. Over the sections of the district lying in Illinois, Indiana, and Ohio the mean temperature of the month was slightly over 55°; while in the Valley of Lake Champlain, northeastern New York, the northern portion of Lower Michigan, and the Lake Superior region the mean temperature was slightly below 50°. In the remaining portions the mean temperatures ranged between 50° and 55°. The average daily range was from 15° to 20°, being somewhat greater in the Peninsula of Lower Michigan than in the other sections of the district.

The month opened with temperatures generally above normal, and warm weather continued over the areas from the 85th meridian westward practically without interruption until the 27th. In the regions east of the 85th meridian a cool period prevailed from the 7th to the 13th, during which the first killing frosts of the season occurred at most stations in New York, and at several stations in Vermont. The 3d–6th and the 14–19th were periods of decided warmth. During the former practically all localities in the eastern sections experienced the greatest heat of the month, the highest temperatures being general over northern Ohio on the 3d and over New York and Vermont on the 5–6th. In the western portions of the district the maximum heat of October occurred during the warm spell of the 14–19th, most stations recording their highest temperature on the 18th or 19th. A case of heat prostration was reported at Duluth, Minn., on the afternoon of the 18th, where, although the temperature reached but 78°, it is probable that the air was sultry, as a period of showery weather had just set in following a dry spell of 14 days. This case is the first of its kind on record in Duluth during October, and, indeed, prostrations from heat are rare in that city even in the summer months. The highest temperature recorded at any station in the district during the month was 93° at Concord, Mich., on the 14th.

With the passage eastward of a storm center and the following area of high barometric pressure during the last decade of the month, the temperature dropped sharply, the fall beginning in the northwestern sections on the 27th and becoming general on the 28th. The coldest weather of the month prevailed during this period, with temperatures below the freezing point, and it continued cold until the 30th. Over the western portions of the district the first killing frosts of the season occurred during this time at many stations (from 2 to 3 weeks later than usual).

PRECIPITATION.

There were, in general, two rainy periods during the month, one covering from 3 to 6 days of the first decade, and the other of greater extent lasting through practically all of the last decade. Between these two periods was an interval of fair weather, many stations recording from 10 to 14 days with no appreciable amounts of rainfall. Over the extreme eastern portions of the district, however, the division between these

rainy periods was not so distinct, and precipitation occurred on a greater number of days than over the remaining sections.

The precipitation was above normal over portions of the Upper Michigan Peninsula, the counties of southwestern Lower Michigan, and northwestern Indiana, northern Ohio, Erie and Niagara counties in western, and the northern tier of counties in northern New York State, and in northwestern Vermont. An excess of more than 1 inch occurred in northern Ohio, extending thence northeastward in a narrow strip through the St. Lawrence region. Elsewhere there was a deficiency in the monthly amounts, reaching more than 1 inch in the extreme western Lake Superior region, the western shore of Lake Michigan, the northern portion of Lower Michigan, those counties in New York lying along the southern border of the district, and in the southern portion of the Lake Champlain Basin. From this it will be seen that the geographical distribution of precipitation in October was peculiar, and decidedly irregular, the region of greatest depth, of course, following the narrow belt of greatest excess mentioned above. The reason for this peculiar distribution of precipitation is to be found in the fact that the principal storms of the month passed farther to the north than is usual in October.

The following, relative to the precipitation conditions in Ohio during the month, is from the report of Mr. J. Warren Smith, section director at Columbus:

Precipitation and floods.—There was a great difference in the amounts of precipitation received in the Maumee Valley and those in the middle and eastern counties. In the extreme northwestern counties the total fall for the month was less than 2 inches, while in parts of Ashtabula, Lake, and Lorain counties it was over 6 inches. At nine of the central stations it was the greatest October rainfall on record. The high record was due to exceptionally heavy rains that fell on the 4–7th. On the 5th and 6th the downpour was almost continuous, and at many points it was the greatest rainfall on record for so short a period in October. The excessive rainfall for the period of the 4–7th at a few of the stations was as follows: Benton Ridge, 4.36; Bucyrus, 4.85; Findlay, 4.55; Fremont, 4.60; Lima, 4.40; New Bremen, 5.00; Norwalk, 4.27; Oberlin, 5.01; Sandusky, 4.17; Tiffin, 4.43; Upper Sandusky, 5.02, and Vickery, 4.22.

Much damage was done by flooding in the Sandusky Valley. The Sandusky River was 0.5 foot above the flood stage on the 7th at Tiffin and Fremont. Slight damage was done at Fremont, but in the vicinity of Tiffin and above that city the damage to corn standing in the shock in the lowlands amounted to thousands of dollars. It is reported that one man lost 60 acres of corn and another 35 acres. Telegrams were sent both of these places on the morning of the 6th, advising them that the river would reach flood stage. The heavy rainfall flooded all low places in Crawford, Hancock, and Wyandot counties. Newly-seeded wheat lands on the hillsides were badly washed.

Snow.—During the passage of the storm of the last decade, referred to in a previous paragraph, heavy and unprecedented falls of snow occurred in several localities on the 28–29th. Seven inches of snow lay along the southwestern shore of Lower Michigan on the morning of the 29th, the fall breaking all previous October snow records as to depth for that section. Deep snow extended for probably 100 miles along the shore, but decreased rapidly toward the interior, there being but 0.1 inch at Grand Rapids. Over Marshall, St. Joseph, and Elkhart counties, in northern Indiana, 15 inches of snow fell during this time, but the depths decreased in all directions, and most of the surrounding stations reported but a trace. The counties in northeastern Ohio and northwestern Pennsylvania also received heavy falls of snow on the 28–29th, the depths ranging from 4 to 6 inches; and at Volusia, N. Y., snow to a depth of 4 inches fell on the 28th. Considering the exceptionally heavy falls in these localities, it is surprising that practically no damage resulted; and there was but small delay caused to transportation, and but slight interruption in the various wire and light services.

The total snowfall for the month was very light in the western Lake Superior region, where the average was but 0.3 inch. The large average amounts shown in the table above for the southern portions of the district are, of course, due to the unusually heavy falls which occurred in the localities affected by the storm of the 28–29th.

MISCELLANEOUS.

Auroras.—Auroras were observed at Escanaba, Mich., on the 1st; at Northfield, Vt., on the 7th and 10th; at Burlington, Vt., on the 7th, 10th, and 26th, and at Canton, N. Y., on the 1st, 7th, 12th, and 13th. That observed at Canton on the 13th was of unusual brilliance and activity, and was accompanied by an auroral cloud of greenish white.

Fog.—Dense fog over the lower St. Clair River and at St. Clair Flats on the 14th caused the grounding of the steamers *Ashley* and *Rockefeller*. Fogs were prevalent over the region between western Lake Erie and southern Lake Huron on the 5th, 8th, 14th, 15th, 18th, 21st, and 31st.

Hail.—Light hail was reported from several places in Ohio on the 16th and 25th.

Windstorms.—Although high wind velocities were reported from many stations during the month, but little damage occurred. During the high wind of the 19th on Lake Superior the steamer *Moreland*, laden with 11,000 tons of iron ore, struck on a reef at Eagle River, and was still aground at the close of the month. At Rochester, N. Y., high winds on the 1st caused some damage to orchards in the vicinity.

TABLE 1.—*Climatological data for October, 1910. District No. 4, Lake Region.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota.																				
Duluth	St. Louis	1,133	39	47.6	+ 2.4	79	15	23	29	30	0.81	− 1.93	0.29	0.0	6	11	10	10	w.	U. S. Weather Bureau.
Floodwood	do	1,257	6	44.0	.....	73	16	17	29	42	1.35	.....	0.62	1.0	4	21	3	7	sw.	M. H. Schussler.
Mount Iron	do	1,510	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Oliver Iron Mining Co.
Stephens Mine	do	1,500	3	44.8	.....	86	17	12	29	54	1.12	.....	0.50	0.4	6	14	9	8	sw.	Do.
Two Harbors	Lake	614	16	48.2	+ 3.2	81	15†	22	29	42	0.75	− 2.49	0.50	0.0	2	13	15	3	ne.	George W. Watts.
Virginia	St. Louis	1,434	16	46.4	+ 4.3	81	17	20	29	43	1.41	− 1.49	0.70	0.2	5	14	11	6	nw.	Oliver Iron Mining Co.
Wisconsin.																				
Appleton	Outagamie	795	11	53.3	+ 4.4	80	18	23	29	34	1.14	− 0.61	0.45	0.8	8	19	6	6	sw.	Wm. O. Thiede.
Ashland	Ashland	647	16	50.2	+ 2.4	86	17	27	29	46	1.09	− 1.75	0.44	0.0	10	19	3	9	s.	Sam Wheeler.
Bayfield	Bayfield	635	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Ruben V. Ryder.
Cecil	Shawano	804	3	51.7	.....	81	17†	22	29	44	1.65	.....	0.70	T.	5	14	12	5	sw.	Louis W. Schmidt.
Chilton	Calumet	860	16	51.7	+ 2.5	82	18	22	29	39	0.98	− 1.23	0.55	T.	7	13	15	3	sw.	Daniel V. Jones.
Crandon	Forest	1,060	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Calvin T. H. Riggs.
Florence	Florence	1,293	19	47.4	+ 3.2	78	18	21	29	41	2.86	+ 0.26	1.20	T.	5	17	4	10	sw.	Fred S. Evans.
Fond du Lac	Fond du Lac	800	24	52.8	+ 4.3	85	17	22	29‖	43	0.64	− 1.41	0.37	T.	6	18	5	8	sw.	Geo. W. Marshall.
Grand River Locks	Marquette	770	14	51.6	.....	83	18	16	29	38	0.87	− 2.11	0.40	T.	4	20	3	8	s.	Jerry Parkinson.
Green Bay	Brown	617	24	52.0	+ 4.9	80	18	24	29	34	1.41	− 0.96	0.74	T.	5	8	10	13	sw.	U. S. Weather Bureau.
Iron River	Bayfield	1,098	1	49.7	.....	85	17	20	29	37	0.84	.....	0.29	1.0	8	15	6	10	sw.	Harry C. Hall.
Kewaunee	Kewaunee	590	1	51.8	.....	74	19	24	29	30	1.37	.....	0.82	T.	4	18	5	8	s.	Eugene V. Kimball.
Manitowoc	Manitowoc	616	59	52.8	+ 4.5	78	11	24	29	33	1.07	− 1.47	0.63	T.	7	14	6	11	s.	Johanna Lups.
Menasha	Winnebago	764	13	.....	.....	.....	.....	.....	.....	.....	1.07	− 1.48	0.51	0.0	4	22	1	8	sw.	George T. Allanson.
Menominee Falls	Waukesha	842	1	53.2	.....	80	17	21	29	34	1.62	.....	0.72	T.	4	22	5	4	sw.	Arthur H. Christman.
Milwaukee	Milwaukee	681	40	54.8	+ 4.6	82	3	26	29	30	1.24	− 1.15	0.60	T.	7	16	8	7	w.	U. S. Weather Bureau.
New London	Outagamie	762	14	51.6	+ 2.9	82	17†	21	29	41	1.30	− 1.15	0.55	0.0	4	15	6	10	sw.	August H. Pape.
Oconto	Oconto	590	19	51.8	+ 3.3	81	18	22	29	38	2.37	+ 0.13	0.81	0.0	6	14	12	5	s.	William K. Smith.
Oshkosh	Winnebago	744	21	52.9	+ 3.5	83	17†	19	29	39	0.74	− 1.39	0.30	T.	6	20	11	0	sw.	Evan Vincent.
Pine River	Waushara	900	15	52.0[c]	+ 3.2	83	18	19	29	39[c]	1.02	− 1.33	0.33	T.	9	12[c]	11[c]	5[c]	sw.	George H. Carpenter.
Plum Island	Door	588	2	51.0	.....	69	16	32	29†	24	3.55	.....	0.90	T.	8	9	10	12	s.	John P. Whelan.
Plymouth‖	Sheboygan	843	....	52.9	.....	83	17	24	29	37	0.85	.....	0.48	0.3	6	16	11	4	s.	Paul O. Feldrappe.
Port Washington	Ozaukee	713	17	53.6	+ 4.2	78	11†	23	29	28	0.87	− 1.08	0.42	0.5	3	16	5	10	sc.	Richard C. Kann.
Racine	Racine	633	13	55.4	+ 2.9	83	3	20	29	31	2.13	+ 0.54	0.90	T.	7	18	6	7	s.	Daniel Davis.
Ripon	Fond du Lac	935	....	53.4	.....	82	17	27	29	32	0.97	.....	0.42	T.	6	17	6	8	w.	Ripon College.
Sheboygan	Sheboygan	831	12	54.0	+ 3.5	79	1	22	29	30	1.05	− 1.34	0.52	T.	6	15	11	5	sw.	Louis C. Meyer.
Sturgeon Bay	Door	600	12	51.1	+ 3.8	74	18†	28	29	32	2.84	.....	0.81	T.	7	15	10	6	sw.	Adam N. Dier.
Superior	Douglas	671	1	47.8	.....	79	18	22	29	35	0.80	.....	0.27	0.0	7	17	11	3	sw.	Edward B. Banks.
Waupaca	Waupaca	857	14	52.5	+ 4.3	85	17	20	29	44	1.31	− 0.98	0.37	0.0	7	16	3	12	sw.	James H. Flagg.
Illinois.																				
Chicago	Cook	824	40	58.6	+ 5.4	84	17	27	29	25	1.79	− 0.76	1.10	T.	7	14	12	5	sw.	U. S. Weather Bureau.
Indiana.																				
Auburn	DeKalb	874	14	51.4	+ 0.4	81	16	27	29	39	1.30	− 1.00	0.42	0.0	6	19	2	10	w.	Mrs. Josie B. Kuhlman.
Berne	Adams	849	....	56.0	.....	84	3	28	29†	33	3.68	.....	1.84	T.	8	20	5	6	sw.	H. M. Reusser.
Elkhart‖	Elkhart	801	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Miles Medical Co.
Fort Wayne	Allen	775	14	56.6	+ 2.9	86	3	28	29	37	1.71	− 0.71	0.76	T.	7	18	3	10	sw.	Orion E. Mohler.
Hammond	Lake	598	19	57.8	+ 4.0	88	17	19	29	35	1.01	− 0.80	0.51	0.0	4	18	7	6	.....	Carson W. Whitney.
Howe	Lagrange	886	5	53.6	.....	85	3	28	29	40	1.68	.....	0.53	3.0	4	17	6	8	w.	James E. Zook.
South Bend	St. Joseph	726	17	55.6	+ 2.5	83	3	25	29	37	4.66	+ 2.24	2.29	15.0	12	17	3	11	sw.	Henry H. Swaim.
Whiting	Lake	606	....	59.1	.....	87	14	24	29	31	2.82	.....	1.10	T.	5	19	3	9	sw.	D. H. Boyd.
Michigan—Upper Peninsula.																				
Baraga	Baraga	623	8	50.0	.....	86	17	11	28	53	.....	.....	.....	.....	.....	20	0	11	w.	D., S. S. & A. Ry.
Bergland	Ontonagon	1,300	....	.....	.....	85[a]	19	.....	.....	.....	4.16	.....	0.98	9.0	11	11	9	11	w.	Frank McMonigal.
Blaney	Schoolcraft	....	3	.....	.....	.....	.....	.....	.....	.....	3.32	.....	1.30[b]	1.0	8	13[b]	1[b]	15[b]	nw.	Dr. S. S. Hackwell.
Calumet	Houghton	1,246	22	47.4	+ 3.5	80	17†	23	28	35	2.22	− 0.98	0.59	4.0	11	15	4	12	w.	E. S. Grierson.
Chatham	Alger	875	9	45.2	.....	80	18	22	29	40	3.10	.....	0.70	3.9	12	10	8	13	sw.	U. P. Experiment Station.
Deer Park	Luce	610	9	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Sara E. McGaw.
Detour	Chippewa	585	9	49.2	.....	87	22	25	29†	46	4.41	.....	2.70	T.	5	20	0	11	se.	Dr. F. E. Cameron.
Eagle Harbor	Keweenaw	622	11	49.4	+ 7.0	80	17	30	28†	36	1.63	− 1.11	0.62	0.4	9	13	5	13	w.	John Nolen.
Escanaba	Delta	612	37	48.6	+ 3.5	71	8	21	29	23	3.04	− 0.05	1.56	1.1	8	8	7	16	s.	U. S. Weather Bureau.
Ewen	Ontonagon	1,147	9	47.5	.....	83	17	17	29	42	2.86	.....	1.00	16.0	7	18	2	11	w.	W. B. Hatfield.
Grand Marais	Alger	610	9	45.8	.....	70[a]	5†	28	29	26	2.60	.....	1.00	2.0	9	12	5	14	s.	Mrs. Lena Truedell.
Houghton	Houghton	668	9	48.2	+ 4.2	86	17	26	27	42	2.34	− 0.84	0.57	4.0	9	10	7	14	w.	U. S. Weather Bureau.
Humboldt	Marquette	1,536	13	45.8	+ 3.9	79	18	9	29	48	2.44	− 0.31	0.50	12.0	8	14	6	11	w.	D., S. S. & A. Ry.
Iron Mountain	Dickinson	1,111	9	51.0	.....	80	18	24	28†	41[a]	2.36	.....	0.80	T.	5	15[a]	11[a]	4[a]	sw.	Chapin Mining Co.
Iron River	Iron	1,504	13	46.0	.....	83	18	14	29	49	2.39	.....	0.80	T.	5	19	10	2	nw.	Victor D. Laing.
Ironwood	Gogebic	1,520	7	48.6	.....	81	17	18	29	35	3.27	.....	1.85	11.0	9	16	6	9	w.	Prof. J. V. Brennan.
Ishpeming	Marquette	1,536	10	46.8	+ 1.4	79	18	8	29	37[a]	2.40	− 1.02	0.60	9.5	10	13[a]	8[a]	9[a]	nw.	Cliv'd'Cliffs Iron Co.
Isle Royale	Keweenaw	610	3	46.4	.....	66	17	28	28	21	1.36	.....	0.46	T.	5	16	2	13	n.	John H. Malone.
Mackinac Island	Mackinac	831	10	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. I. S. P. Com.
Maple Ridge	Delta	....	4	46.0	.....	78	18	15	29	40	2.48	.....	1.01	6.0	8	15	5	11	s.	Herman Johnson.
Marquette	Marquette	734	39	49.4	+ 3.7	83	18	24	29	32	3.53	+ 0.34	1.11	11.5	10	8	10	13	nw.	U. S. Weather Bureau.
Menominee	Menominee	581	11	52.5	+ 3.0	78	18	24	29	27	2.91	+ 0.51	1.18	0.0	4	21	5	5	sw.	C. & N. W. Ry.
Newberry	Luce	773	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D., S. S. & A. Ry.
Powers	Menominee	868	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. & N. W. Ry.
St. Ignace	Mackinac	593	20	49.8	+ 4.2	79	19	25	29	38	4.19	+ 1.67	0.93	T.	10	15	11	5	w.	D., S. S . & A. Ry.
Sault Ste. Marie	Chippewa	614	22	46.0	+ 2.6	78	19	25	29	37	2.83	− 0.43	1.12	T.	11	5	9	17	nw.	U. S. Weather Bureau.
Thomaston	Gogebic	1,347	13	46.2	+ 1.7	82	17	19	29	47	2.53	+ 0.44	0.90	6.0	8	12	9	10	n.	D., S. S. & A. Ry.
Victoria	Ontonagon	1,263	....	48.1	.....	84	17	21	29	35	2.83	.....	0.83	10.5	11	19	2	10	nw.	R. S. Schultz, jr.
Watersmeet	Gogebic	....	1	46.7	.....	81	17	21	28†	43	2.03	.....	0.60	4.5	10	12	5	14	n.	B. N. Grant.
Wetmore	Alger	878	13	47.0	+ 3.0	80	18	14	4	49	2.40	− 0.38	0.90	4.0	6	17	0	14	n.	D., S. S. & A. Ry.
Whitefish Point	Chippewa	610	20	47.8	.....	69	19	25	29	30	2.30	.....	0.70	0.4	14	11	4	16	nw.	Robert Carlson.
Michigan—Lower Peninsula.																				
Adrian	Lenawee	770	32	55.6	+ 3.6	87	3	23	29	41	1.55	− 1.32	0.67	T.	5	15	9	7	s.	B. F. Gibbs.
Allegan	Allegan	698	19	54.8	+ 3.8	88	16	29	29	39	2.87	+ 0.11	1.14	T.	7	0	19	12	sw.	Pere Marquette R. R.
Alma	Gratiot	750	23	51.4	+ 2.9	81	18†	23	29	34	3.25	+ 0.61	1.40	T.	8	16	7	8	sw.	P. M. Smith.
Alpena	Alpena	609	37	49.3	+ 3.4	83	18	26	29	36	3.47	+ 0.04	1.04	2.1	13	10	10	11	nw.	U. S. Weather Bureau.
Ann Arbor	Washtenaw	930	30	53.8	+ 3.9	83	3†	23	30	34	1.85	− 0.81	0.68	T.	9	16	5	10	nw.	University of Michigan.
Arbela	Tuscola	728	14	51.9	+ 1.9	83	18	21	29	40	3.70	+ 0.92	1.73	0.0	7	0	13	18	sw.	Wm. Atkin.
Battle Creek	Calhoun	822	26	53.4	+ 1.6	81	18	25	29	32[b]	2.84	+ 0.57	1.45[b]	0.5	8	14[b]	6[b]	9[b]	sw.	Elmer E. Sager.
Bay City	Bay	593	14	53.4	+ 3.3	83	18†	22	29	35	2.75	− 0.29	1.25	0.0	5	16	10	5	nw.	Pere Marquette R. R.
Benzonia	Benzie	832	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Martin S. Joiner.
Berlin	St. Clair	....	21	57.8	+ 2.9	84	18	22	29	38[a]	1.33	− 1.50	0.78	T.	5	11[a]	11[a]	8[a]	sw.	R. O. Gould.
Big Rapids	Mecosta	906	14	50.6	+ 2.5	81	18	21	29	41	2.47	− 0.43	1.05	T.	9	15	10	6	sw.	Charles Gay.
Bloomingdale	Van Buren	....	6	55.6	.....	83	17	26	30	34	2.62	.....	1.35	3.0	6	20	4	7	se.	John M. Haven.
Cadillac	Wexford	1,293	1	50.2	.....	80	18	19	29	43[f]	3.48	.....	.....	5.5	....	13[a]	6[a]	5[a]	s.	A. J. Teed.
Casopolis	Cass	903	9	56.2	.....	82	3	27	29†	38	3.40	.....	2.20	1.4	4	22	0	9	sw.	Michigan Central R. R.
Charlevoix	Charlevoix	610	32	52.0[c]	+ 2.6	78	19	28	29	27[c]	2.55	− 0.03	0.70	2.0	....	14[a]	5[a]	8[a]	sw.	Pere Marquette R. R.

TABLE 1.—*Climatological data for October, 1910. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Michigan—Lower Peninsula—Cont'd.																				
Charlotte	Eaton		6	52.7		81	3	23	29	38				0.0		14	10	7	sw.	City of Charlotte.
Cheboygan	Cheboygan	611	20	50.2	+ 2.3	75	19	30	7†	34	5.81	+ 3.33	1.62	T.	8	5	14	12	nw.	E. A. Bouchard.
Clinton	Lenawee	830	20	54.0	+ 2.5	85	3†	23	9	36	1.29	− 1.11	0.62	0.0	4	17	7	7	sw.	David Woodward.
Coldwater	Branch	984	13	55.9	+ 2.3	84	3	26	29	35	1.38	− 1.85	0.40	2.0	6	18	5	8	sw.	Lake Shore & Mich. So. Ry.
Concord	Jackson		5	56.8		93	14	23	29	46	1.19		0.45	T.	4	18	11	2	sw.	Dr. W. N. Armstrong.
Croton	Newago	685	2	53.6		81	18	26	29	36	2.10		1.25	T.	8	8	15	8	sw.	G. R. Mus. Power Co.
Detroit	Wayne	730	39	54.6	+ 2.9	82	3	26	29	29	1.07	− 1.31	0 73	T.	7	14	9	8	w.	U. S. Weather Bureau.
Durand	Shiawassee	799	3	54.6		85	18	24	29	34	1.94		0.74	T.	6	19	6	6	sw.	Grand Trunk Ry.
East Tawas	Iosco	590	13	49.9	+ 1.1	73	11	22	29	33	3.23	+ 0.30	1.00	0.0	8	20	6	5	w.	Detroit & Mackinac Ry.
Eloise	Wayne	640	13	54.6	+ 2.1	83	3	25	29	37	1.24	− 1.23	0.58	T.	7	15	8	6	sw.	John Gilmore.
Flint	Genesee	730	21	52.8	+ 4.0	83	18	22	30	38	1.99	− 0.06	0.61	1.0	7	17	7	7	s.	Wm. L. Fisher.
Frankfort	Benzie	589	6	52.5		71	17	28	29	28	3.22		0.78	0.0	8	7	0	24	s.	Capt. Geo. Morency.
Ganges	Allegan	665	1	54.8		83	3	28	29	32	4.40		1.39	15.0	10	19	3	9	sw.	H. H. Hutchins.
Gaylord	Otsego	1,367	5	50.8		76	18	24	28	32	1.31		1.12	T.	3	15	0	16	nw.	Michigan Central R. R.
Gladwin	Gladwin	794	14	54.8[b]	+ 6.8	83	18	27	7	43[b]	2.15	− 0.20			3	15[b]	5[b]	3[b]	sw.	Geo. R. Smith.
Grand Haven	Ottawa	628	29	53.0	+ 2.8	80	17	27	29	30	2.48	− 0.01	0.76	8.0	7	14	10	7	s.	U. S. Weather Bureau.
Grand Rapids	Kent	707	21	54.0	+ 3.9	82	18	26	29	29	3.17	+ 0.63	1.70	0.1	10	12	12	7	sw.	U. S. Weather Bureau.
Grape	Monroe	625	20	54.3	+ 2.5	87	3	23	29	38	1.28	− 0.76	0.70	T.	7	18	8	5	w.	Joseph W. Morris.
Grass Lake	Jackson	989	4	54.0		82	3	22	29	32	1.64		0.35	1.0	8	19	0	12	sw.	Menzo Conklin.
Grayling	Crawford	1,147	21																	Dr. Oscar Palmer.
Harbor Beach	Huron	635	22	52.3	+ 3.0	80	18	27	29†	34	1.30	− 1.56	0.30	1.0	8	15	3	13	sw.	Pere Marquette R. R.
Harrison	Clare	1,159	17	51.2	+ 3.9	83	18	20	29	40	1.75	− 1.07	1.02	0.0	3	21	2	8	sw.	Do.
Harrisville	Alcona	616	26	49.1	+ 1.1	76	5†	22	29	44	3.45	+ 0.73	1.28	0.0	12	8	13	10	sw.	Dr. D. W. Mitchell.
Hart	Oceana	698	18	53.4	+ 3.8	78	3†	26	31	35	3.78	+ 1.02	1.60	25.0	7	13	8	10	sw.	Pere Marquette R. R.
Hayes	Huron	620	20	54.5	+ 4.6	83	2	30	30	49[a]	2.68	− 0.09	0.73	0.0	5	17	0	14		C. F. Leipprandt.
Highland	Oakland	830	18								1.60	− 0.94	0.64							A. D. De Garmo.
Hillsdale	Hillsdale	1,150	13	52.8	+ 0.7	81	3	24	29	30	1.65	− 1.41	0.52	2.0	9	17	3	11	sw.	Prof. C. L. Herron.
Holland	Ottawa	610	4	54.0		83	3	28	29	33	3.73		1.48	7.0		15	10	6	sw.	City of Holland.
Howell	Livingston	924	18	52.4	+ 2.9	81	3†	22	29	35	1.51	− 0.65	0.60	0.0	7	19	4	8	sw.	Frank Sharp.
Ivan	Kalkaska		21	49.8	+ 3.4	80	18	13	29	39	3.41	+ 0.68	0.75	4.5	9	9	14	8	sw.	O. L. Giddings.
Jackson	Jackson	927	13	55.2	+ 2.6	85	3	23	29	34	2.10	− 0.59	0.57	1.5	8	17	8	6	w.	City of Jackson.
Jeddo	St. Clair	667	21	52.1	+ 2 6	83	18	23	30	33	1 77	− 0 77	0.61	0.0	5	15	5	11	sw.	William Bice.
Kalamazoo	Kalamazoo	955	34								2.13	− 0.57	0.64	1.0	8	16	4	11	w.	Kalamazoo Asylum.
Lansing (Agr'l. College)	Ingham	820	46	51.8	+ 3.1	82	18	23	29	31	2.27	− 0.17	0.93	0.6	8	16	5	10	sw.	U. S. Weather Bureau.
Lansing (Capitol)	do	881	23	54.0	+ 4.5	83	3†	24	29	29	2.61	− 0.24	0.80	0.5	8	16	4	11	sw.	State Board of Health.
Lapeer	Lapeer	827	11	53.4	+ 2.4	84	18	24	30	36	1.60	− 0.40	0.56	T.	5	12	12	7	nw.	Michigan Home.
Ludington	Mason	586	12	52.8[c]	+ 2.3	75	17	25	31	31[c]	2.93	+ 0.69	0.76	4.0	7	11[c]	9[c]	6[c]	sw.	Pere Marquette R. R.
Luther	Lake	1,028	0	50.4		83	18	15	29	40	3.09		0.98	5.8	11	13	10	8	w.	John W. Nichoson.
Mackinaw	Cheboygan	592	14	48.8	+ 1.0	82	19	28	7	38	3.25	− 0.20	0.95	0.0	7	12	3	16	nw.	Grand Rapids & Ind. Ry.
Mancelona	Antrim	1,121	14	51.2	+ 4.0			10	29		3.89	+ 0.79	1.10	2.0	8	17	1	13	ne.	Do.
Manistee	Manistee	600	13	53.8	+ 5.2	81	19	28	29	32	3.62	+ 1.37	0.83	12.0	8	21	3	7	sw.	Pere Marquette R. R.
Midland	Midland	604	11	49.2	− 0.9	80	3†	20	29	49						17	4	10	n.	Do.
Montague	Muskegon	660	7																	Gerard A. Whitbeck.
Morenci	Lenawee	811	3	55.4		84	3	25	29	38	1.76		0.59	T.	8	16	6	9	sw	George J. Tripp.
Mount Clemens	Macomb	615	10			80	14†				1.44	− 0.70	0.78	0.0	5	17	8	6	sw.	Water Works.
Mount Pleasant	Isabella	826	11	50.4	+ 1.7	76	1†	28	13	36	1.14	− 1.08	0.74	0.9	3	16	1	14	w.	Pere Marquette R. R.
Muskegon	Muskegon	587	14	53.4	+ 2.3	78	3†	26	29	32	2.45	− 0.24	0.80	6.0	4	14	5	12	w.	Grand Rapids & Ind. Ry.
Old Mission	Grand Traverse	858	16	51.7	+ 2.0	80	18†	25	29	31	3.72	+ 0.77	0.63	0.0	13	3	22	6	sw.	E. O. Ladd.
Olivet	Eaton	934	20	52.2	+ 3.2	79	3	24	29	30	2.81	− 0.17	0.83	1.5	7	20	2	9	s.	Prof. G. A. Knapp.
Omer	Arenac	616	11											0.0		10	10	11	sw.	Detroit & Mackinac Ry.
Onaway	Presque Isle	826	7	52.5		81	19	28	13	40	4.50		1.10	0.0	8	5	4	22	sw.	Do.
Ovid	Clinton	760	20																	Dr. B. L. Bates.
Owosso	Shiawassee	731	13	54.2	+ 2.4	82	18	24	29	32[a]	3.79	+ 1.28	2.00	2.0	7	14[a]	15[a]	1[a]	w.	Owosso Sugar Co.
Petoskey	Emmet	660	20	50.6	+ 2.6	80	19	24	29	35	1.50	− 1.30	0.32	T.	9	10	11	10	w.	Grand Rapids & Ind. Ry.
Plymouth	Wayne	725	13	54.2	+ 2.5	85	18†	22[a]	29	44[a]						19	0	12	sw.	Pere Marquette R. R.
Pontiac	Oakland	935	10	54.0	+ 5.5	86	2	25	29	36	1.95	− 0.42	0.63	T.	8	17	6	8	sw.	Fred W. Shaw.
Port Austin	Huron	618	14																	Pere Marquette R. R.
Port Huron	St. Clair	639	35	52.1	+ 2.6	80	18	26	29	30	1.22	− 1.51	0.57	T.	6	12	6	13	sw.	U. S. Weather Bureau.
Reed City	Osceola	1,033	14	53.2[c]	+ 5.1	90	6	22[b]	29	32[b]	1.20	− 1.94	1.00	T.	3				sw.	Pere Marquette R. R.
Roscommon	Roscommon	1,141	6	49.0		80	18	17	29	44	2.46		0.85	1.5	9	13	9	9	sw.	State Forestry Com.
Saginaw	Saginaw	601	8	53.5		81	3	25	29	33	2.37		0.90	T.	7	9	16	6	nw.	Postmaster.
Saginaw, W. S.	do	601	15	52.6	+ 2.6	83	18	23	29	35	2.83	+ 0.20	0.84	T.	10	17	8	6	sw.	Robert B. Hudson.
St. James	Charlevoix	681	4	49.4		75	18	31	29†	43[a]	3.08		0.67	T.	8	7	12	12	sw.	Rev. N. Wilhelm.
St. Joseph	Berrien	593	23	56.3	+ 3.9	84	3	24	28	39	3.86	+ 1.04	1.30	3.0	8	16	5	10	sw.	City of St. Joseph.
Sandusky	Sanilac	700	1	53.4		84	18	22	29	43[a]	2.69		1.28	0.0	3	18[a]	4[a]	8[a]	s.	Pere Marquette R. R.
Saranac	Ionia	639	15	53.2	+ 4.2	84	19	21	29	37	3.61	+ 0.53	1.47	0.0	7	13	6	12	sw.	John Wallington.
South Haven	Van Buren	585	14								2.80	+ 0.51	0.80	12.0	6	20	6	5	sw.	Mrs. M. E. De Diemar.
Stanton	Montcalm	880	17	52.6	+ 4.1	82	18	20	27†	33[a]				0.5		17[a]	1[a]	12[a]	sw.	City of Stanton.
Thornville	Lapeer	975	33	51.9	+ 1.2	79	18	22	29†	32	2.30	− 0.74	0.82	2.0	8	13[d]	5[d]	9[d]	nw.	Dr. J. S. Caulkins.
Traverse City	Grand Traverse	588	13																	Grand Rapids & Ind. Ry.
Vassar	Tuscola	641	9					26	29†		2 47		0.80	0.0	4	8[a]	16[a]	6[a]	sw.	Pere Marquette R. R.
Wasepi	St. Joseph	842	13	55.0	+ 3.0	82	3†	28	29†	34	2.35	− 0.60	0.68	2.0	6	20	0	11	sw.	Chas. A. Palmer.
Webberville	Ingham	884	8	52.8		82	18	22	29	35	1.71		0.48	T.	7	12	10	9	sw.	I. R. Wadsworth.
West Branch	Ogemaw	973	7	46.6		86	2	30[a]	21†	36				T.		15[a]	7[a]	8[a]	n.	Michigan Central R. R.
Woodlawn	Montmorency		8	47.0		80	18	13	29	44	3.42		0.50	5.5	15	8	12	11	sw.	T. C. Mathews.
Ypsilanti	Washtenaw	736	25	53.4	+ 3.8	84	3	23	9	38	1.35	− 1.21	0.60	0.0	7	10	17	4	nw.	Orin J. Bemiss.
Ohio.																				
Akron	Summit	1,081	23	55.8[a]	+ 4.2	84[a]	3	27[a]	29†	37[a]	4.11	+ 1.89	2.40	0.8	10	17	3	11	sw.	Prof. C. R. Olin.
Benton Ridge	Hancock	800	17	56.1	+ 3.0	84	3	26	29	32	5.02	+ 2.95	2.60	T.	6	17	7	7	sw.	J. W. Powell.
Bowling Green	Wood	670	30	55.2	+ 2.9	87	3	25	29	38	4.31	+ 1.75	1.60	T.	5	16	8	7	sw.	G. C. Housekeeper.
Bucyrus	Crawford	1,000	15	54.5[a]	+ 2.9	88[a]	3	23	29	41[a]	6.13	+ 3.88	3.20	T.	6	23	1	7	s.	James R. Hopley.
Cleveland (1)	Cuyahoga	762	39	56.0	+ 2.9	84	3	33	30	32	3.79	+ 1.06	2.03	T.	6	15	7	9	se.	U. S. Weather Bureau.
Cleveland (2)§	do	754	13	55.6	+ 2.6	84	3	31	30	34	5.70	+ 3.08	2.35	0.5	7	19	3	9	sw.	Rev. F. L. Odenbach, S. J.
Conneaut	Ashtabula	675		55.0		83	3	28	30	38	6.69		2.01	6.0	12	9	8	14	nw.	E. L. Ransom.
Defiance	Defiance	712	16	55.6	+ 2.6	86	3	24	29	38	1.93	− 0.43	1.02	0.4	6	20	4	7	sw.	John F. Heilshorn.
Findlay	Hancock	776	21	54.0	+ 1.3	89	3	25	29†	40	5.80	+ 3.68	2.60	T.	7	23	4	4	sw.	Dr. E. A. Moser.
Fremont§	Sandusky	628	9	55.8		85	3	25	29	38	5.00		3.05	T.	6	20	3	8	sw.	E. Stanley Thomas.
Hedges	Paulding	725	16	56.1	+ 3.6	84	3	25	29	36	2.27	+ 0.28	1.59	T.	4	19	3	9	sw.	Charles Stutzman.
Hillhouse	Lake	997	18	54.9	+ 3.3	82	3†	26	30	39	6.06	+ 2.00	2.05	1.0	11	17	8	6	nw.	J. W. Doncaster.
Hiram	Portage	1,260	26	55.0	+ 4.2	82	3	27	30	39	3.97	+ 1.12	1.41	1.0	8	15	9	7	nw.	Prof. G. H. Colton.
Hudson	Summit	1,153	49	54.4	+ 2.9	83	3	25	30	40	5.37	+ 2.68	2.70	0.0	9	19	9	3	n.	Dr. W. I. Chamberlain.
Lima	Allen	875	11	54.6	+ 1.8	83	3	26	29	29	4.95	+ 2.99	2.00	T.	5	23	0	8	sw.	Miss Ollie De Long.
Medina	Medina	944	22	56.2	+ 4.0	86	3	25	29	38	4.59	+ 2.19	2.03	2.0	6	18	5	8	s.	F. W. Clark.
Montpelier	Williams	880	18	55.6	+ 4.5	85	3	24	29	36	1.71	− 0.54	0.50	T.	5	16	3	12	w.	G. L. Laser.
Napoleon	Henry	680	24	57.1	+ 4.1	86	3	26	29	37	1.87	− 0.09	1.00	T.	5	19	4	8	s.	A. C. Senter.
New Bremen	Auglaize	1 038	17	56.5	+ 2.7	85	3	27	30	34	5.48	+ 3.57	2.24	T.	6	20	4	7	w.	Miss Lillian Grothaus.

TABLE 1.—*Climatological data for October, 1910. District No. 4*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Ohio—Cont'd.																				
North Royalton	Cuyahoga	1,000	18	54.8	+ 1.9	84	3	25	29	38	4.74	+ 2.29	2.00	0.0	5	17	9	5	nw.	W. S. Edgerton.
Norwalk	Huron	719	24	54.2	+ 1.3	86	3	26	29†	41	5.25	+ 2.93	2.25	0.0	6	16	7	8	sw.	Dr. Albert Sheldon.
Oberlin	Lorain	855	35	55.7	+ 3.9	83	3	26	30	38	6.04	+ 3.78	2.65	T.	7	15	7	9	s.	Prof. F. F. Jewett.
Ottawa	Putnam	720	18	55.8	+ 2.7	86	3	19	30	37	3.30	+ 1.41	2.00	T.	7	2	21	8	sw.	Prof. J. T. Maidlow.
Sandusky	Erie	629	33	56.2	+ 2.3	85	3	28	29	33	4.91	+ 2.48	2.33	T.	8	15	9	7	sw.	U. S. Weather Bureau.
Tiffin	Seneca	775	28	55.6	+ 3.5	83	3	27	29	33	5.03	+ 2.79	2.45	T.	9	17	6	8	s.	Prof. T. H. Sonnedecker.
Toledo (1)	Lucas	769	39	56.2	+ 3.6	85	3	27	29	33	2.34	+ 0.08	1.54	0.1	8	18	7	6	sw.	U. S. Weather Bureau.
Toledo (2)‖	...do	606	6	56.4	.....	86	3	26	29	34	1.97	.....	1.08	T.	8	18	3	10	sw.	J. A. Krance, S. J.
Upper Sandusky	Wyandot	854	27	56.1	+ 2.9	85	3	26	28	35	5.22	+ 2.97	2.58	T.	4	16	6	9	w.	Prof. R. J. Kiefer.
Vickery	Sandusky	588	17	56.8	+ 4.0	88	3	25	29	40	5.12	+ 2.75	2.41	T.	6	15	6	10	sw.	John W. Barr.
Wauseon	Fulton	780	38	55.0ª	+ 4.0	87ª	3	22ª	29	38ª	1.91	− 0.52	0.89	0.3	9	17	8	6	s.	Thomas Mikesell
Wellington	Lorain	856	16	56.0	+ 2.8	85ª	4	26	29	41ª	4.39	+ 2.27	2.31	0.2	6	20	3	8	nw.	W. D. Warren.
Willoughby	Lake	649	16	.....	.....	.....	.....	.....	.....	.....	2.50	− 0.42	1.10	.....	5	6	15	10	s.	C. J. Richardson.
Pennsylvania.																				
Erie	Erie	713	37	54.8	+ 2.1	80	3	32	30	30	5.00	+ 1.28	1.86	4.3	9	9	13	9	s.	U. S. Weather Bureau.
New York.																				
Adams Center	Jefferson	340	19	51.4	+ 3.9	78	19	27	13†	33	5.77	+ 1.34	2.72	5.0	9	12	10	9	n.	A. E. Cooley
Angelica	Allegany	1,340	27	49.9	+ 3.0	77	4†	19	30	43	2.62	− 0.39	0.85	1.0	10	4	14	13	w.	Chales P. Arnold.
Appleton	Niagara	270	19	52.2	+ 2.2	78	4	29	30	30ª	4.36	+ 1.68	1.68	T.	6	9ª	12ª	9ª	nw.	H. A. Van Wagoner.
Auburn	Cayuga	715	41	51.7	+ 2.0	83	6	25	30	34	2.84	− 0.61	1.46	T.	7	20	7	4	n.	A. H. Underwood.
Avon	Livingston	585	15	52.0	+ 1.7	76	1†	26	30	36	2.94	+ 0.39	1.00	T.	6	7	14	10	.....	W. G. Markham.
Blue Mountain Lake	Hamilton	1,750	10	.....	.....	.....	.....	.....	.....	.....	2.62	− 1.41	0.42	5.0	9	17	2	12	w.	B. F. Merwin.
Brockport	Monroe	537	14	52.6	+ 1.2	80	4	26	29	36	3.69	+ 0.67	1.12	3.0	10	10	12	9	w.	W. H. Lennon.
Buffalo	Erie	767	59	53.4	+ 1.9	78	3	28	29	32	5.26	+ 1.73	1.91	0.2	12	9	12	10	sw.	U. S. Weather Bureau.
Canton	St. Lawrence	448	16	47.6	+ 0.4	78	4	21	13	34	4.41	+ 1.07	1.76	0.6	13	9	8	14	sw.	Do.
Cape Vincent	Jefferson	246	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Verne M. Rice.
Carvers Falls	Washington	243	12	51.1	+ 2.8	84	6	22	30	39	1.25	− 1.73	0.46	0.0	5	20	5	6	s.	Washburn Fancher.
Chazy	Clinton	151	10	49.9	+ 1.7	77	6	25	30	37	5.36	+ 2.64	1.25	0.8	11	10	6	15	n.	W. R. North.
Dannemora	...do	1,490	5	46.8	.....	79	6	20	29	39	3.79	.....	0.79	3.0	15	11	3	17	w.	W. N. Thayer.
Elba	Genesee	500	11	49.8	0.0	78	4	22	30	37	3.00	+ 0.23	1.15	T.	7	14	8	9	sw.	Jos. S. Wilford.
Fayetteville	Onondaga	530	9	53.0	.....	82	6†	25	13	36	1.93	− 1.47	1.01	T.	8	15	5	11	nw.	Dana H. Wells.
Gabriels	Franklin	1,729	8	45.8	.....	80	6	16	30	46	4.16	.....	0.80	1.5	17	14	3	14	nw.	Sanatorium.
Harkness	Clinton	622	8	48.4	.....	82	6	24	13	37	2.31	.....	0.37	.....	13	20	1	10	w.	J. W. Harkness.
Hemlock Lake	Livingston	900	12	52.2	+ 1.0	77	6	27	13	35	2.34	− 0.22	1.44	T.	3	15	5	11	sw.	D. H. Westbury.
Hunt	...do	1,321	11	53.4	+ 2.6	82	18†	20	30	41	2.79	− 0.14	1.28	0.0	5	11	17	3	nw.	W. S. Barrager.
Ithaca	Tompkins	928	32	51.8	+ 2.3	82	6	26	30	37	2.29	− 0.88	1.21	T.	7	9	11	11	nw.	U. S. Weather Bureau.
Keene Valley	Essex	1,000	12	49.0	+ 1.4	82	6†	22	30	46	2.39	− 1.08	0.45	0.2	16	13	5	13	s.	E. R. Wells.
King Ferry	Cayuga	.....	10	.....	.....	.....	.....	.....	.....	.....	2.11	− 1.37	1.00	T.	7	15	7	9	nw.	Lucius A. Goodyear.
Lake George	Warren	350	13	51.2	+ 1.6	81	6	25	31	40	1.58	− 1.91	0.74	T.	8	16	11	4	n.	Charles Forsell.
Lake Placid Club	Essex	1,864	2	42.6	.....	73	6	15	31	39	3.34	.....	0.49	13.0	15	8	10	13	nw.	Henry van Hoevenberg.
Le Roy	Genesee	920	20	52.1	+ 4.3	82	18	25	30	37	2.92	+ 0.32	0.93	0.9	9	11	8	12	nw.	F. W. Ball.
Lockport	Niagara	650	23	51.6	+ 0.2	77	4	27	29†	32	4.51	+ 1.87	1.43	0.8	11	14	7	10	sw.	J. E. Wakeman.
Lowville	Lewis	900	43	47.0	+ 0.8	82	6	20	30	45	4.10	+ 0.71	1.30	.....	10	15	7	9	w.	Charles J. Rice.
Lyndonville	Orleans	.....	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Milton St. John.
Moira	Franklin	200	10	46.6	− 1.5	79	5	25	13	35	4.21	+ 1.46	1.30	2.0	12	4	15	12	w.	C. E. McBride.
Nehasane	Hamilton	1,750	2	44.6	.....	78	6	14	30	48	4.87	.....	0.91	4.3	16	9	11	11	s.	A. C. Heyburn.
North Lake	Herkimer	1,822	9	46.7	+ 1.1	75	4	18	22†	.....	.....	.....	.....	.....	.....	16	7	8	.....	H. A. Paull.
Ogdensburg	St. Lawrence	175	26	49.8	− 0.4	76	5	28	13	36	4.03	+ 1.69	1.34	T.	13	10	17	4	nw.	State Hospital.
Old Forge	Herkimer	1,733	2	46.3	.....	80ª	20	16	13†	44ª	3.96	.....	0.70	T.	15	16	6	9	w.	Stuart W. Nelson.
Oswego	Oswego	335	40	51.8	+ 0.6	80	6	28	30	33	3.38	+ 0.04	0.92	1.1	11	8	8	15	s.	U. S. Weather Bureau.
Otto	Cattaraugus	1,410	6	51.8	.....	78	22	22	30	38	3.40	.....	1.10	0.0	9	14	8	9	.....	William Winke.
Palermo	Oswego	460	51	.....	.....	.....	.....	.....	.....	.....	2.22	− 1.33	0.90	1.0	11	13	7	11	sw.	E. B. Bartlett.
Perry City	Schuyler	1,038	30	51.5	+ 3.7	83	6	21	30	40	2.78	− 1.11	1.53	0.9	7	12	6	13	nw.	W. H. Jeffers.
Philadelphia	Jefferson	485	4	50.0	.....	79	6	22	13	36	5.63	.....	1.63	3.5	13	9	12	10	sw.	E. D. Babcock.
Plattsburg	Clinton	170	60	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. P. Davison.
Potsdam	St. Lawrence	300	34	48.0	+ 2.9	78	5	24	13	44	5.15	+ 2.81	1.02	.....	19	13	0	18	w.	A. E. Sutuerland.
Raquette Lake	Hamilton	.....	2	45.5	.....	75	6	20	30	36	3.75	.....	0.62	3.0	16	8	3	20	sw.	R. J. Dunning.
Rochester	Monroe	523	81	52.8	+ 2.0	81	18	30	30	33	2.95	+ 0.09	1.12	2.2	10	9	11	11	sw.	U. S. Weather Bureau.
Romulus	Seneca	719	18	53.2	+ 2.0	82	6	27	31	35	1.16	− 2.06	0.76	.....	5	6	15	10	nw.	John H. Coryell.
Shortsville	Ontario	740	11	52.0	+ 0.5	80	18	27	30	42	2.16	− 0.68	0.69	.....	7	15	10	6	nw.	C. H. Latting.
Skaneateles	Onondaga	.....	15	.....	.....	.....	.....	.....	.....	.....	2.34	− 1.39	0.85	.....	11	.....	.....	.....	.....	Edward Conron.
Syracuse	...do	397	8	51.8	+ 0.8	83	6	29	30	36	1.53	− 1.68	0.67	0.4	10	10	7	14	s.	U. S. Weather Bureau.
Ticonderoga	Essex	344	12	.....	.....	.....	.....	.....	.....	.....	1.29	− 1.45	0.60	T.	7	.....	.....	.....	s.	Eva M. De Lano.
Trudeau	...do	1,620	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Daniel Smith.
Tupper Lake	Franklin	1,522	10	46.4	.....	79	19	18	13	41	3.50	.....	0.50	1.5	14	16	0	15	w.	Aaron W. Maddox.
Volusia	Chatauqua	1,167	11	52.0	+ 1.1	79	18	26	30	35	3.89	+ 0.05	1.12	4.0	9	12	12	7	s.	Benjamin Breads.
Wanakena	St. Lawrence	.....	6	45.3	.....	80	19	16	29	45	4.78	.....	1.36	.....	12	13	9	9	sw.	J. Otto Hamele.
Watertown	Jefferson	737	18	50.6	+ 0.8	78	6	25	30	34	5.49	+ 1.74	1.92	2.0	12	13	4	14	sw.	H. F. Dunlap.
Wedgewood	Schuyler	1,430	21	51.8	+ 2.4	82	6	23	30	33	1.69	− 1.71	0.52	T.	10	15	12	4	sw.	Orlando F. Corwin.
Westfield	Chatauqua	837	14	53.8	+ 1.2	80	18	29	30	35	3.91	+ 0.17	1.70	2.0	9	.....	.....	.....	.....	John R. Rogers.
Youngstown	Niagara	.....	8	.....	.....	.....	.....	.....	.....	.....	3.75	.....	1.48	0.0	4	11	16	4	n.	B. V. Brookins.
Vermont.																				
Burlington	Chittenden	404	3	47.8	+ 0.9	81	6	30	30	31	3.34	+ 0.18	0.98	2.9	13	4	11	16	s.	U. S. Weather Bureau.
Cornwall	Addison	507	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Lane.
Enosburg Falls	Franklin	601	19	48.4	+ 1.1	81	6†	24	31	39	4.51	+ 1.70	0.83	1.5	16	8	9	14	nw.	L. Howe Pomeroy.
Northfield	Washington	876	24	45.8	+ 2.2	82	6	19	31	38	1.68	− 0.80	0.39	0.5	15	4	11	16	s.	U. S. Weather Bureau.
Rutland	Rutland	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. L. Hindley.
Wells	...do	750	19	48.2	+ 0.2	80	6	23	30	31	1.53	− 1.02	0.32	0.0	10	13	8	10	s.	E. R. Pember.

ª, ᵇ, ᶜ, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
¶ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 4, Lake Region.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota.																																	
Duluth	Lake	T.	.28	.06															.29	T.	T.	.15			T.	.02		.01					0.81
Floodwood	do		.30																.62		.07							.36					1.35
Mount Iron	do																																
Stephens Mine	do		.04											.20						.50		.25					T.	.07	.06				1.12
Two Harbors	do		.50	T.																		.25											0.75
Virginia	do		.05	T.										.11					T.	.70		.20						.35	T.				1.41
Wisconsin.																																	
Appleton	Fox		.06	.21	.12																	.45	.03				.07	.09	.11				1.14
Ashland	Lake		.44	.07										.05						.04	.10	.16	.05			.11	.02	.05					1.09
Bayfield	do																																
Cecil	Fox		.48		*	.08																.70	.05				.24	.10					1.65
Chilton	do		.11	.02	.02	T.										T.						.55	.07			T.	.03	.18	T.				0.98
Crandon	do																																
Florence	Menominee		.94	.43																		*	1.20					.29					2.86
Fond du Lac	Fox		.02	T.	.05	.01															T.	.37	.05				T.	.14	T.				0.64
Grand River Locks	do		.07	.25	.15																	.40	T.					T.					0.87
Green Bay	Lake		.18	.17																	T.	.74					.25	.07	T.				1.41
Iron River	do		.29	.05										.03						.05	.05	.25	.02					.10					0.84
Kewaunee	do			.06	.04																	.82					.45	T.	T.				1.37
Manitowoc	do		.04	.10	.04	*	.03															.63					.20	.03					1.07
Menasha	Fox		.09	.28																		.51					T.	.19					1.07
Menominee Falls	Lake			.06	.64	T.															T.	.72						.20					1.62
Milwaukee	do		T.	.26	.34	.02	.11													T.	.02	.47					.02	T.	T.				1.24
New London	Fox		.20	.25																		.55					.30	T.					1.30
Oconto	Lake		.72	.16																	.20	.81					.45						2.37
Oshkosh	Fox		.04	.05	.15																	.30	.10				T.	.10	T.				0.74
Pine River	do		.22	.17	.01															.01		.33	.07			.01	.03	.17	T.				1.02
Plum Island	Lake		.70	.30	.08																	.90	.25				.72	.44	.16				3.55
Plymouth	do		.17	.01	.04	T.															T.	.48					T.	.12	.03				0.85
Port Washington	do			*	.40																.42							.05					0.87
Racine	do		T.	.90	.48	.01	.12														.02	.58						.02	T.				2.13
Ripon	Fox		.13	.08	.10																	.42	.11					.13					0.97
Sheboygan	Lake		.25	.08	10	T.															.03	.52	.07					T.	T.				1.05
Sturgeon Bay	do		.53	.81	.05																	.80	.11			T.	.43	.11	T.				2.84
Superior	do		.27	.05	.01															.25		.11	.09			.02	T.						0.80
Waupaca	Fox		.17	.37																.02		.33	.17				.03	.22					1.31
Illinois.																																	
Chicago	Lake Michigan			.96	.14	.16	.23														.03	.26			T.			.01	T.				1.79
Indiana.																																	
Auburn	Maumee			T.	.20	.17	.13	.33														T.	.42					.05					1.30
Berne	do				.46	.80	1.84															.44	.02			.01		.09	.02				3.68
Elkhart	St. Joseph																																
Fort Wayne	Maumee			.05	.40	.02	.76															.39				T.		.02	.07				1.71
Hammond	Lake Michigan				.51																.08	.40	.02										1.01
Howe	St. Joseph				.50		.35																.53						.30				1.68
South Bend	do				2.29	.19	.05	.03								.02						.12	.39			.01		.06	.10	1.30	.10		4.66
Whiting	Lake Michigan			T.	1.10	1.00	.29													.02	T.	.41						T.					2.82
Michigan—Upper Peninsula.																																	
Baraga	Lake																																
Bergland	Ontonagon		.19	.98	.50										.10						.19	.33	.10					.10	.80	.77				4.16
Blaney	Manistique	.18	.12		1.30									.59								.45	.85				.20	.12	.10					3.32
Calumet	Lake	.06	.21	.26										.59	T.					.08	T.	.42	.17				.07	.20	.13	.03				2.22
Chatham	do		.58	.15										.02						.32	.09	.70	.68	.03			.10	.06	.18	.21				3.10
Deer Park	do																																
Detour	St. Marys							2.70	.12												.31		.96					.32	T.					4.41
Eagle Harbor	Lake	.05	.15	.20										.40	T.					.02	T.	.62					.15		.03	.01				1.63
Escanaba	do		.80	.14																.01		1.47	.09			T.	.36	.10	.07					3.04
Ewen	Ontonagon		1.00	.10										.10						.03			.03					1.00	.60				2.86
Grand Marais	Lake	.20	.15	.20	.20				.05											.05		1.00	.50	T.					.25	T.	T.		2.60
Houghton	do		.49	.19										.53						.03	T.	.55	.02				.07	.35	.11	T.				2.34
Humboldt	Escanaba		.42	.36										.10							.20	.36					T.	T.	.50	.30	.20		2.44
Iron Mountain	Menominee		.75	.08																.04		.66					.80	T.	T.				2.36
Iron River	do		.70	.45																	T.	.80	.34					.10	T.				2.39
Ironwood	Lake		1.85	.08										.01						T.	.03	.34				.21	.04	.40	.31	T.			3.27
Ishpeming	Escanaba			.30										.05	T.					.15	.10	.50	.30				.05	.30	.60	.05			2.40
Isle Royale	Lake	.20	.24	.21										.46							.25							T.	T.				1.36
Mackinac Island	do																																
Maple Ridge	do	.03	.80	.10	.04																	.72	1.01				.18		.60				3.48
Marquette	do		.49	.57		T.								.03						.12		.97	.14				.02	.10	.59	.50			3.53
Menominee	Menominee		.81	.12																		1.18					.80						2.91
Newberry	Tequamenon																																
Powers	Lake																																
St. Ignace	do	.49	.93		.45	T.	T.		T.						T.						.50	.42	.58	.16		.10	.27	.29	T.	T.				4.19
Sault Ste. Marie	St. Marys		.15	1.11	.04				.13					.21	.03					.07		.78	.09	.01	T.		.21		T.					2.83
Thomaston	Lake	.90	.30	.10										.05						T.	T.	.43	.15					.30	.30				2.53
Victoria	Ontonagon		.64	.19										.05	T.					.05	.04	.44	.26				.06	.83	.20	.07			2.83
Watersmeet	do		.60	.35																.04	.02	.35	.08			.04	.10	.30	.15				2.03
Wetmore	Lake		.90	.20																		.85					.05		.20	.20			2.40
Whitefish Point	do	.17	.03	.33	.19				.05					.01	.46	T.				.10	.01	.15	.70				T.	.02	.06	.02				2.30
Michigan—Lower Peninsula.																																	
Adrian	Raisin				.18		.67										.12					.48						.10	T.				1.55
Allegan	Kalamazoo			.11	1.14															.09	.91	.10						.11	.41				2.87
Alma	Saginaw			.57	1.40	T.	.20														T.	.60	.09				.18	.17	.04				3.25
Alpena	Lake		.30	.33	.76	.01	.17		.01	T.										.12	.20	.35	.15		T.	T.	.48	.44	.15	T.			3.47
Ann Arbor	Huron			.19	.11	.11	.68															.54				.03	.03	.12	.04				1.85
Arbela	Saginaw			.11	1.73		.74															.22	.70				.11	.09					3.70
Battle Creek	Kalamazoo			.25	1.45		.18										.10					.50	.07					.12	.17	T.			2.84
Bay City	Saginaw			.25	1.25		.75														.10		.40										2.75
Benzonia	Betsie																																
Berlin	Clinton			.01	.15	T.	.78															.33	.06	T.				T.	T.				1.33
Big Rapids	Muskegon			.02	.61	T.	.14															1.05	.06				.22	.12	.21	.04			2.47
Bloomingdale	Lake			14	1.35		.29														T.	.74	.05				T.		.05	T.			2.62
Cadillac	Manistee		.14	.07	.85		.12																		1.00		.15	.45	.40	.30			3.48
Cassopolis	St. Joseph			T.	2.20																	.70						T.	.30	.20			3.40
Charlevoix	Lake	.05				.42														.48		.60	.20				.70	.10					2.55
Charlotte	Kalamazoo			.25	.95	T.	.23										T.																
Cheboygan	Cheboygan	.10	.50	.95	1.62				T.							T.					1.04	.50	1.00					.10	T.				5.81
Clinton	Raisin			T.	.16	T.	.62															.41	.10										1.29
Coldwater	St. Joseph			.20	.16	T.	.32															.40	.05					T.	.25				1.38
Concord	Kalamazoo			T.	.32	T.	.30										.12				T.	.45	T.					T.	T.	T.			1.19
Croton	Muskegon			.03	.36		.14														.05	1.25	.02				T.	.16	.09	T.			2.01
Detroit	Detroit				.07	.01	.72														T.	.10			T.	.01	.06	.04					1.07

TABLE 2.—*Daily precipitation for October, 1910. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Michigan—Lower Peninsula—Cont'd.																															
Durand	Saginaw				.74	T.	.55															.19	.26				.10	T.	.10				1.94
East Tawas	Lake		.20	.30	1.00		.30														.08	.35					.70	.30				3.23
Eloise	Rouge				.10	T.	.58															.26	.16				.01	.10	.03				1.24
Flint	Saginaw			.05	.40		.60																.61				.08	.05	.20				1.99
Frankfort	Betsie		.30		.60																.39	.78					.30	.50	.15	.20			3.22
Ganges	Lake			.05	1.39	.05	.22														.15	.87	.03					.15	.99	.50			4.40
Gaylord	Cheboygan																					.08	.11				1.12	T.					1.31
Gladwin	Saginaw			.10	1.90																	.15											2.15
Grand Haven	Grand			.55	.22	T.	.08													T.	T.	.76					T.	.13	.51	.23			2.48
Grand Rapids	...do			1.54	.16	.06	.16													.05	.03	1.01	.07			T.	T.	.08	.01	T.			3.17
Grape	Raisin				.12	.11	.70															.28	.02					.01	.04				1.28
Grass Lake	Grand			.06	.22	.25	.35															.33	.12					.16	.15	T.			1.64
Grayling	Au Sable																																
Harbor Beach	Lake				.20		.15																.30			.05	.10	.25	.15	.10			1.30
Harrison	Saginaw																				.24	1.02					.49						1.75
Harrisville	Lake	.10	.05	.20	1.28		.27		.02												.22	.25	.15			.03	.18	.70					3.45
Hart	Pentwater				.80		.16															.30					.02	.10	.80	1.60			3.78
Hayes	Pigeon					.25	.73														T.	.42	.63					.65	T.				2.68
Highland	Huron			.11	.37		.40															.64	.08										1.60
Hillsdale	Saint Joseph			.03	.52	.03	.41										.02				T.	.49	T.					.05	.05	.05			1.65
Holland	Lake			14	1.48		.20										.01				16	1.00	.02					.02	.25	.44	.01		3.73
Howell	Saginaw			.10	.40		.60															.25	.01				.05	.10	T.				1.51
Ivan	Manistee		.35	.26	.50	.02															T.	.75	.18				.35	.57	.34	T.			3.41
Jackson	Grand			.13	.50	.11	.57										T.					.42	.08					.14	.15	T.			2.10
Jeddo	St. Clair				.46		.61															.37	.28				T.	.05					1.77
Kalamazoo	Kalamazoo			.64	.50	.40															.14	.10				.05	.15	.15	T.			2.13
Lansing (Agri. Col.)	Grand			.22	.82	.06	.35															.56	.03				.11	.12					2.27
Lansing	...do			.15	.80	T.	.76														T.	56	.05				.10	.10	.09				2.61
Lapeer	Saginaw				.37		.56																.17	.45			.05		T.	T.			1.60
Ludington	Pere Marquette			.65	.47																	.76	.42				.19		.37	.07			2.93
Luther	Manistee		.03	.10	.74		.17															.98	.10	.01			.18	.34	.38	.06			3.09
Mackinaw	Lake		.30		.95				T.					T.							.75	.25	.47				.21	.32					3.25
Mancelona	...do		.10	T.	1.10		T.														.05	1.00	.40				.25	.59	.40				3.89
Manistee	Manistee		T.		.37																.20	.83	.22			T.	.17	.63	T.	.80	.40	T.		3.62
Midland	Saginaw			.10	2.00	.10																T.	T.				T.	T.					
Montague	White				.44																								2.00	.80			
Morenci	Maumee			.02	.17	.02	.59										.39					.25	.10					T.	.22				1.76
Mount Clemens	Clinton				.20	.08	.78															.35	.03				T.	T.					1.44
Mount Pleasant	Saginaw																				.74	.23				.17							1.14
Muskegon	Muskegon				.65	T.																.60	T.			T.			.40	.80			2.45
Old Mission	Lake		.63	.26	.13	.03															.32	.59	.19	.06		.08	.47	.51	.32	.13			3.72
Olivet	Kalamazoo			.37	1.07		.36										.01				T.	.76	.07					.17	T.	T.			2.81
Omer	Lake																				.75		1.10					.80					4.50
Onaway	Cheboygan	.30	.65	.45	.25		.20																										
Ovid	Grand																					.26	.46				.10		.27				3.79
Owosso	Saginaw			.04	.66		2.00															.32	.10				.22	.24	.04				1.50
Petoskey	Lake		.12		.10	.12			.24																								
Plymouth	Rouge				.75		1.00																										
Pontiac	Clinton			.15	.10	.05	.55	.02														.40	.05				.63	T.	T.	T.			1.93
Port Austin	Lake																																
Port Huron	St. Clair				.15	.01	.43														T.	.57	T.		T.	.04	T.	.02	T.				1.22
Reed City	Muskegon			.15	.05																	1.00						T.		T.			1.20
Roscommon	Au Sable		.06	.01	.25		.12															.85					.52	.50	.10	.05			2.46
Saginaw	Saginaw		T.	.12	.90		.65														.02	.52	T.	T.	T.		.15	.01					2.37
Saginaw, W. S	...do		T.	.22	.80	.03	.84														.02	.45	.11	T.	T.		.10	.23	.03				2.83
St. James	Lake	.60	.60		.40															.06		.67	.30				.23	.22	T.				3.08
St. Joseph	St. Joseph			.20	1.30	.75	.11																.25					.20	.75	.30			3.86
Sandusky	Lake				.52		1.28																.80										2.69
Saranac	Grand			.38	1.47		.42															1.03	.20				.09	.02					3.61
South Haven	Lake				.40		.20															.90						.40	.80	.40			2.80
Stanton	Grand				.12	.06																2.00						.05					
Thornville	Saginaw			.12	.48		.82															.28	.22		.08			.12	.18				2.30
Traverse City	Lake																																
Vassar	Saginaw				.55		.57															T.	.80					.55	T.				2.47
Wasepi	St. Joseph			.67	.68		.18															.60						.02	.20				2.35
Webberville	Grand			.22	.42	T.	.32															.48	.10		T.	T.	.11	.06					1.71
West Branch	Lake																				.07					T.		.06	T.				
Woodlawn	Au Sable	.10	.10	.20	.50	.06	.10		.04								.02				.30	.50	.38	.05		T.	.50	.42	.15				3.42
Ypsilanti	Lake			T.	.05	.01	.60															.57				T.	.01	.06	.05				1.35
Ohio.																																	
Akron[‖]	Lake	T.					.07	2.40	.68								T.					.01		.55		.24	.02	.01	.05	.08	T.		4.11
Benton Ridge	Maumee				.66	1.10	2.60											.40				.21						.05					5.02
Bowling Green	Lake				.27	.90	1.60											1.16				.38				T.		T.	T.				4.31
Bucyrus[‖]	Sandusky					1.00	3.20	.65											.80			T.	.45					.03	T.	T.			6.13
Cleveland (1)	Lake				.11	1.43	1.53															.46	T.		T.	.10		.16	T.	T.	T.		3.79
Cleveland (2)	...do				.12	2.05	2.35															.66		T.		.15		.32	.05				5.70
Conneaut	...do	.01				.58	2.01	.20															.89	.08		.57	.01	.09	1.90	.22	.13		6.69
Defiance[‖]	Maumee			T.	.23	.20	1.02										.14				T.	.30						T.	.04	T.			1.93
Findlay[‖]	...do				T.	1.21	2.60	.74										.81					.32				.06	.06	T.	T.			5.80
Fremont	Sandusky				1.05	.50	3.05										.16						.40			T.	.04		T.				5.00
Hedges	Maumee				.15	.16	1.59															.37							T.	T.			2.27
Hillhouse	Lake	.10				.66	2.05	.42															.55	T.		.85	.07	.15	1.00	.15	.06		6.06
Hiram	...do	T.			T.	1.00	1.41	.16															.68	T.	T.	.53	T.	.06	.08	.05			3.97
Hudson	...do					1.52	2.70	.15									.03						.59		.04	.20			.12	.02			5.37
Lima	Maumee				.84	1.56	2.00															.32						.23	T.				4.95
Medina	Lake					2.03	1.60	.06															.60		T.	.19		T.	.11				4.59
Montpelier	Maumee				.48		.15	.50														.48					.10	T.					1.71
Napoleon	...do				.21	.21	1.00										T.					.32	.13		T			T.	T.	T.		1.87
New Bremen	...do				.89	1.87	2.24															.19				T.		.25	.04	T.			5.48
North Royalton	Lake					1.80	2.00	.20															.56			.18							4.74
Norwalk[‖]	...do					.62	2.25	1.40															.77			.06		.15					5.25
Oberlin	...do				.06	1.47	2.65	.83														.37	.53						.13	T.			6.04
Ottawa	Maumee				.38	.53	2.00										T.				T.	.32	.02					.04	.01				3.30
Sandusky	Lake				.71	1.38	2.08														T.	.66	.01			.01		.04	.02	T.			4.91
Tiffin	Sandusky				.14	1.24	2.45	.60									.09	T.			T.	.24	.02			.09		.16	T.	T.			5.03
Toledo (1)	Maumee				.25	.48	1.15										.01				T.	.34	.04			T.		.05	.02				2.34
Toledo (2)	...do				.20	.32	1.08										.04	T.				.21	.06					.04	.02				1.97
Upper Sandusky	Sandusky				T.	1.42	2.58	1.02													.20							T.	T.				5.22
Vickery	Lake				.74	1.07	2.41										T.					.83	.02			.05			T.				5.12
Wauseon[‖]	Maumee			.03	.23	.24	.89										T.				T.	.39	.05			T.		.04	.03	.01			1.91
Wellington	Lake					1.28	2.31																.61		T.	.10	.05	T.		.04			4.3
Willoughby[‖]	...do				1.10																	.60			.23			.15	.42				2.50

TABLE 2.—*Daily precipitation for October, 1910. District No. 4*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Pennsylvania.																															
Erie	Lake				T.	1.01	1.58	T.								T.						.70	.14		T.	.65	.01	.37	.53	.01	T.		5.00
New York.																																	
Adams Center	Lake					.43	2.72	.38		.09													.19		1.14		.32	.30	.20			5.77
Angelica	Genesee	.04				.07	.85	.31														T.	.50	.01		.47		.15	.14	.08			2.62
Appleton	Lake				T.	1.17	1.68	.10		T.													.30			.73		.38	T.	T.			4.36
Auburn	Oswego					.22	1.46																.20			.70		.10	.08	.08			2.84
Avon	Genesee					.20	1.00	.38															.40		T.	.83		.13	T.	T.			2.94
Blue Mountain Lake	Raquette	.23								.27						T.							.23	.25		.21		.27	.38	.42		.36	2.62
Brockport	Lake					.35	1.00	.24															.27	.08		1.12		.27	.05	.28	.03		3.69
Buffalo	Lake	.03			.12	.98	1.38	T.														.01	.81		.01	1.25	.11	.15	.39	.02	T.		5.26
Canton	St. Lawrence	.11			.01	.18	1.74	.01		.33					.12	.04					T.		.12			1.08		.41	.21	.05			4.41
Cape Vincent	...do																																
Carvers Falls	Lake									.15													.36	.12		.16		.46					1.25
Chazy	...do	.20					.68	.98		1.25	.15				.10	T.								.40		.50	.60	.45	.05				5.36
Dannemora	...do	.27	.50			.05	.47	.37		.06	.03				.07	T.				T.	T.		.23	T.	.05	.30	.79	.45	.10	.05			3.79
Elba	...do					.30	.90	.10															.30			1.15		.20	.05	T.			3.00
Fayetteville	Oswego	T.				.12	T.	1.01		T.	.03												.04	.13		.27	T.	.23	T.	.10	T.		1.93
Gabriels	Lake	.15	.20		.02	.15	.43	.72		.10	.05				.15	.04	.02						.80	.05		.65	.27	.22		.14			4.16
Harkness	...do	.25					.10	.27		.02	.02				.24								.22	.02		.25	.37	.25	.24	.06			2.31
Hemlock Lake	Genesee						1.44																.18			.72				T.			2.34
Hunt	...do					.47	1.28																.30			.46		.28					2.79
Ithaca	Oswego						1.07	.14		T.			T.			T.							.23	.01	.06	.70		.08	T.	T.			2.29
Keene Valley	Au Sable	.35	.21			.09	.07	.16		.17	.11				.03						T.		.11	.09	.06	.27	.10	.45	.08	.04			2.39
King Ferry	Oswego					.09	1.00																	.20	T.	.55	.05	.16		.06			2.11
Lake George	Lake	.06				T.		.02		.31													.20	.02		.11		.74	T.	.12			1.58
Lake Placid Club	Au Sable, W. Br.	.33	.03		T.	.05	.33			.33					.08	.05					T.		.21	.05	T.	.49	.20	.33	.41	.35	.10		3.34
Le Roy	Genesee				T.	.25	.95	.16															.50	.11	T.	.65	T.	.17	.09	.04			2.92
Lockport	Lake				.02	.81	1.43	.21															.42	.03	T.	.85		.39	.05	.29	.01		4.51
Lowville	...do	.18				.25	1.30	.08		.33												.18		.18		.50		.35		.75			4.10
Lyndonville	...do																																
Moira	St. Lawrence		.11			.06	1.22	.34		.10					.20	T.			T.		T.		.13			1.30	.06	.42	.16	.11			4.21
Nehasane	Lake	.17	.12		T.	.40	.60	.45		.72	T.		T.		.01	.03	T.						.28	.25		.66	.16	.68	.23	.08	.03		4.87
North Lake	...do			.50										.75																			
Ogdensburg	St. Lawrence	.51	.01			.10	1.34	.21		.16					.15	.02	T.					.06		.03		1.00	.02	.42	T.	T.			4.03
Old Forge	Lake	.09	.03			.33	.21	.70		.28	.12												.38	.28		.68	.06	.47	.18	.10	.05		3.96
Oswego	...do	T.	T.	T.	T.	.92	.67	.01		T.					T.								.44	.30	T.	.43	.01	.10	.23	.21	.06		3.38
Otto	...do					.23	1.10	.48															.29	.89	.08			.15	.12	T.	.06		3.40
Palermo	...do			T.		.05	.90	.46														.02	.20	.10	.06	.10		.21	.04	.08			2.22
Perry City	...do					.09	.43	1.10															.21	T.		.72		.14		.09			2.78
Philadelphia	St. Lawrence	.18	T.		T.	.37	1.63	.42		.34					T.	.02							.33	.22	1.13		.06	.47	.40	.06			5.63
Plattsburg	Lake																																
Potsdam	St. Lawrence	.09	.20			.02	.91	1.02		.18	.30				.05	.18	.04		.02					.15	.02	.34	.75	.35	.11	.17	.25		5.15
Raquette Lake	Raquette	.10	.20			.14	.19	.62		.47	.06					.03							.51	.08	.10	.30	.03	.57	.27	.08			3.75
Rochester	Genesee					.54	1.02	.03															.32	.01	T.	.66	.04	.07	.04	.22			2.95
Romulus	Oswego					T.	.34	.41															T.			T.	.18		.08		.15		1.16
Shortsville	...do					.34	.69	.23																.65	T.	.08	.06	.11					2.16
Skaneateles	...do					.15	.85	.18														.13	.10	T.	.12	.50	.07	.05	.15	.04			2.34
Syracuse	...do			T.		.09	.66	.01		T.					T.								.14	.08	.02	.19		.28	.02	.04			1.53
Ticonderoga	Lake									T.				.02	.01	.01							.15			.20		.60	.30	T.			1.29
Trudeau	...do																																
Tupper Lake	Raquette	.30	.15			.07	.50	.50		.30	.18					.03							.40	.05		.40	T.	.50	.10	T.	.02		3.50
Volusia	Lake					.09	1.12	.39															.61	.06		.60	.02	.24	.76				3.89
Wanakena	Oswegatchie	.25				.61	1.36	.22		.55						.03							.28		.70	.01	.56	.20	.01				4.78
Watertown	Lake	.05			T.	.44	1.92	.25		.34					T.	.01							.27	.45		1.03		.27	.35	.11			5.49
Wedgewood	Oswego					.04	.47	.24														.01	.24	.05		.52		.09	.01	.02			1.69
Westfield	Lake					.38	1.70	.21															.39	.28	T.		.09	.31	.49	.06	T.		3.91
Youngstown	...do				T.	1.37	1.48	.08																		.82							3.75
Vermont.																																	
Burlington	Lake	.31			T.	.13	.51	.20		.36					.02	T.	T.				.20		.26	.05	T.	.98	.05	.37	.19	.01			3.34
Cornwall	...do																																
Enosburg Falls	...do	.42	.58		T.	.07	.13	.83		.10	.03				.12	.01					T.		.20	.10		.58	.75	.38	.06	.15			4.51
Northfield	...do	.24	.15		T.	.07	.04	.04		.17	.03				.01	.01							.28	.10		.12	.01	.28	.13				1.68
Rutland	...do																																
Wells	...do	.05				T.		.07		.11	.08												.32	.26		.12	.11	.27	.14				1.53

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 4, Lake Region.*

Date.	Duluth, Minn.		Wisconsin.						Chicago, Ill.		Fort Wayne, Ind.		Michigan, Upper Peninsula.										Michigan, Lower Peninsula					
			Florence.		Green Bay.		Milwaukee.						Escanaba.		Ewen.		Houghton.		Marquette.		Sault Ste. Marie		Alpena.		Battle Creek.		Cadillac.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	67	43	60	48	69	52	70	57	74	62	78	58	63	44	65	36	57	40	61	44	55	38	61	43	71	45	65	53
2...	55	47	50	39	59	48	63	56	70	57	72	39	57	40	53	35	51	40	54	41	45	32	52	36	68	40	55	35
3...	63	47	70	44	76	59	82	62	82	65	86	49	64	56	67	50	69	51	73	53	64	45	66	52	72	50	75	45
4...	65	42	60	43	63	51	70	57	72	65	72	63	58	49	65	43	66	45	63	47	62	52	64	58	71	62	68	60
5...	56	38	66	48	68	52	68	55	73	64	71	65	70	48	63	45	61	47	72	46	68	50	77	52	75	62	69	58
6...	60	33	56	30	60	44	57	47	64	53	67	50	57	41	57	25	52	39	51	40	50	37	52	36	68	45	59	40
7...	70	47	67	29	66	42	66	46	61	48	67	34	60	43	69	29	73	37	69	44	63	32	58	32	60	31	63	32
8...	64	45	67	51	71	50	70	48	69	49	71	34	71	49	65	55	65	45	68	47	58	46	59	44	66	34	65	43
9...	54	37	68	40	59	44	57	47	58	52	65	42	55	42	63	48	55	41	51	43	50	39	51	38	57	42	55	44
10...	72	46	72	37	66	41	68	45	67	49	67	34	60	41	65	47	74	41	77	47	64	35	69	33	65	33	60	32
11...	57	46	77	44	76	49	78	52	75	54	75	39	63	45	75	35	63	43	62	45	67	43	68	47	70	45	71	46
12...	46	40	55	32	53	44	63	51	62	56	69	44	49	39	60	35	43	35	45	36	48	33	52	38	62	45	60	39
13...	50	43	61	31	68	44	64	51	71	52	73	41	55	45	63	35	51	43	55	36	50	34	52	43	68	37	63	32
14...	60	48	59	45	58	48	68	50	78	56	81	48	54	46	65	49	50	44	50	46	54	47	56	47	80	51	.....	.....
15...	79	49	74	41	70	44	75	50	74	54	77	52	65	42	75	49	72	43	76	45	63	47	71	47	.....	.....	67	41
16...	62	49	69	39	69	49	70	55	83	64	84	53	62	49	74	32	67	45	60	49	57	40	68	43	72	55	71	46
17...	70	48	77	36	79	45	77	55	84	62	85	53	61	44	83	41	86	44	76	55	65	37	58	39	78	53	77	41
18...	78	58	78	56	80	58	74	58	78	65	85	53	68	55	78	40	82	58	83	56	77	49	83	50	81	53	80	56
19...	58	34	68	40	72	45	80	50	81	56	83	50	64	43	68	40	68	37	70	38	78	41	81	55	80	57	.....	.....
20...	38	30	44	30	47	40	50	44	57	49	68	57	48	38	45	40	41	34	42	37	48	34	61	41	65	46	.....	.....
21...	38	33	45	30	54	41	55	44	57	45	61	49	53	38	41	29	45	36	45	37	47	33	53	45	56	46	.....	.....
22...	49	32	47	32	54	35	55	39	56	42	55	42	51	37	48	34	46	40	48	40	48	39	48	39	51	40	.....	.....
23...	53	33	54	26	57	33	59	38	60	41	62	34	52	33	57	26	53	35	56	36	44	36	51	36	56	38	.....	.....
24...	54	37	56	34	63	47	61	49	64	51	66	36	60	42	54	35	54	41	57	43	50	38	60	37	58	42	79	36
25...	53	36	52	36	52	42	54	44	59	47	63	47	54	39	52	37	51	40	53	41	51	35	57	38	59	38	54	40
26...	50	34	42	34	50	39	57	40	72	47	67	36	44	39	48	35	48	42	46	42	46	31	53	35	.....	.....	45	36
27...	40	29	39	29	42	32	44	35	51	36	65	43	41	31	44	26	43	26	43	29	41	31	45	34	58	32	45	32
28...	29	25	32	22	37	28	38	29	41	31	43	30	34	23	31	24	34	26	32	26	33	26	35	26	42	31	34	25
29...	39	23	34	21	37	24	38	26	40	27	43	28	38	21	32	17	36	29	37	24	37	25	37	26	38	25	36	19
30...	51	34	52	27	56	33	59	31	59	34	58	29	55	35	48	28	50	33	55	32	48	34	51	33	52	28	45	28
31...	51	32	54	29	58	34	58	42	60	43	63	34	50	36	49	22	49	35	53	35	53	31	51	32	61	32	57	33
Mns	55.8	39.3	58.6	36.2	60.9	43.1	62.8	46.9	66.3	50.8	69.1	44.1	56.0	41.1	58.8	36.2	56.6	39.8	57.5	41.3	54.3	37.7	58.1	40.5	64.1[b]	42.7[b]	60.7[f]	39.7[f]

Date.	Michigan, Lower Peninsula.						Ohio.								Erie, Pa.		New York.								Vermont.			
	Detroit.		Muskegon.		Saginaw, W. S.		Cleveland.		Lima.		Sandusky.		Toledo.				Buffalo.		Canton.		Rochester.		Syracuse.		Burlington.		Northfield.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	71	50	64	50	70	54	70	58	67	61	73	58	75	54	68	53	68	50	71	44	71	50	72	50	71	48	68	47
2...	61	45	65	43	61	37	58	52	65	42	60	52	62	48	55	49	55	43	54	38	54	43	52	42	54	36	51	38
2...	82	53	78	54	80	48	84	52	83	54	85	52	85	52	80	50	78	46	70	44	78	47	69	44	62	33	61	31
4...	71	64	71	62	71	63	80	65	74	64	76	65	75	64	80	66	77	64	77	62	80	64	77	59	70	55	71	48
5...	71	64	66	60	77	60	70	64	76	65	70	65	71	64	74	65	69	64	77	63	75	65	78	66	76	62	77	63
6...	64	46	66	48	67	43	65	50	65	45	66	49	64	46	68	49	66	48	71	45	72	50	83	47	81	50	82	56
7...	55	43	60	34	62	31	53	48	57	39	55	47	55	40	52	46	55	43	54	35	50	42	50	40	52	36	56	30
8...	65	47	63	40	67	36	64	42	60	40	64	43	68	45	64	41	62	36	62	31	64	33	59	37	59	34	57	25
9...	53	45	62	42	56	43	56	51	63	39	56	50	58	46	57	50	58	48	56	43	57	48	56	49	51	44	51	34
10...	61	44	60	33	65	33	56	46	61	37	56	50	64	43	54	49	58	45	54	38	56	46	50	44	55	41	52	34
11...	73	47	68	52	73	44	72	46	70	42	72	47	74	48	64	49	62	58	64	48	68	51	66	50	66	42	64	32
12...	57	43	63	50	61	40	61	44	58	47	61	49	59	49	60	40	62	39	49	29	58	38	59	36	53	37	62	34
13...	64	46	67	35	63	36	66	41	71	42	63	42	64	45	59	38	59	33	48	21	55	34	53	29	46	33	48	32
14...	78	53	66	57	66	49	74	59	76	57	79	59	80	58	70	55	65	56	52	31	68	52	65	51	46	37	47	36
15...	71	52	61	44	72	48	67	58	75	55	68	56	73	53	67	58	62	51	54	31	60	50	60	49	50	36	49	41
16...	73	56	72	55	74	51	66	57	72	57	68	59	73	58	66	56	66	52	62	38	65	50	64	52	62	47	61	39
17...	75	56	78	48	78	43	76	54	72	58	79	57	78	56	64	47	67	44	65	36	68	42	65	43	64	36	62	32
18...	82	58	78	52	83	50	81	60	79	56	78	60	83	56	80	58	74	56	73	39	81	48	78	46	68	40	67	32
19...	74	59	77	58	81	57	76	57	73	55	78	57	77	57	77	57	76	60	74	57	79	55	77	59	74	57	78	40
20...	64	49	71	49	67	46	68	55	65	53	66	56	67	50	72	54	71	48	64	36	68	48	69	46	60	39	72	42
21...	61	47	56	44	55	46	75	47	61	51	66	48	66	49	70	50	66	44	53	30	60	44	61	40	53	33	55	39
22...	49	42	50	44	53	43	50	44	53	41	48	43	52	44	57	44	65	43	53	44	60	45	53	45	45	40	43	34
23...	55	38	60	37	56	34	51	42	48	35	54	40	59	42	52	46	51	41	46	40	49	42	46	39	50	39	47	40
24...	60	45	60	37	61	38	61	42	54	40	61	42	61	42	61	45	60	43	55	30	59	39	57	43	52	38	53	36
25...	56	43	54	42	59	38	55	48	55	46	55	46	57	46	56	45	57	41	52	36	54	41	51	39	52	40	54	37
26...	55	39	57	44	50	35	59	45	59	39	65	42	65	42	53	43	54	41	46	28	52	35	49	34	45	36	43	32
27...	60	34	48	40	49	34	64	39	60	40	65	37	67	35	63	35	59	42	56	37	60	39	64	40	53	32	50	28
28...	41	28	40	32	39	29	42	34	43	30	42	34	41	31	42	33	43	31	38	30	43	34	44	32	44	32	46	30
29...	40	26	38	26	41	23	39	35	40	26	40	28	42	27	39	34	37	28	33	28	38	30	39	31	36	30	38	25
30...	52	31	48	31	51	29	48	33	52	33	51	31	54	29	44	32	45	28	41	25	43	30	42	29	39	30	38	22
31...	60	38	60	31	62	31	60	40	59	34	61	39	61	39	56	40	55	42	52	39	56	38	52	40	42	32	44	19
Mns	63.0	46.2	62.2	44.6	63.6	41.7	63.5	48.6	63.4	45.9	63.9	48.5	65.5	47.0	62.1	47.6	61.4	45.4	57.3	37.9	61.3	44.3	60.0	43.6	56.1	39.5	56.0	35.4

Climatological Data for October, 1910.

DISTRICT No. 5, UPPER MISSISSIPPI VALLEY.

GEORGE M. CHAPPEL, District Editor.

GENERAL SUMMARY.

October, 1910, was unusually mild and pleasant even for the upper Mississippi Valley, where ideal Indian Summer weather generally prevails at that time of the year. It was the warmest October since 1900, and over the central and northern sections it was the driest since 1895. In fact, it was one of the pleasantest months on record. The long periods of clear and warm weather made it agreeable to man and very favorable for prosecuting all outdoor work, and ripening and maturing the late crops. With the exception of light showers in the northern and central sections and excessive and torrential rainfalls in the extreme southern portion of the district between the 3d and 6th, and a cool wave on the 6th and 7th, clear and warm weather generally prevailed until the 18th. Light showers spread over the district between the afternoon of the 18th and the 22d, and light showers in southern and snow flurries in northern sections were general on the 27th or 28th with cool waves on the 22–23d and 28–29th. At many stations in the southern sections the first killing frost did not occur until the 29th, which is 10 days to 2 weeks later than the average date, and, as a result, all vegetation was fully matured.

TEMPERATURE.

The monthly mean temperature was above the normal at every station in the district and the average for the States or parts of States in the district ranged from 47.8° in North Dakota to 58.6° in Missouri, and the monthly departures ranged from +2.2° in Indiana to +5.3° in Minnesota. Temperatures above 90° were recorded on one or more days in all sections, except in Indiana and Wisconsin, where the highest readings were 85° and 87°, respectively. High temperatures prevailed on the first three days and from the 10th to 18th with the 1st, 2d, 3d, 10th, and 16th as the warmest days. A cool wave spread over the district on the 6th and 7th, which caused light frost in the extreme southern portions of Illinois, and another cool wave passed over the district on the 22–23d which caused heavy frosts in southern sections, but the first severe and general freeze did not occur until the 28–29th, when the temperature was below the freezing point at every station in the district, the minimum temperature ranging from 5° at Prentice, Wis., to 28° at Cairo, Ill. The mean temperature for the district, as shown by the reports of 287 stations, was 53.4°, which is 3.9° above the normal. The highest monthly mean was 62.7° at Cobden, Ill., and the lowest, 44.0° at Bottineau, N. Dak. The highest temperature recorded was 95° at Cobden, Ill., on the 1st, and the lowest was 5° at Prentice, Wis., on the 29th.

PRECIPITATION.

The precipitation was below the normal for the district and for all sections except Illinois, Indiana, and the small portion of South Dakota within this district. It was unevenly distributed, both as to time and geographically, there being a wide range in the monthly amounts between the northern and southern sections, and while the precipitation was quite general between the 3d and 6th and the 18th and 22d, there was a long period of dry weather over the larger part of the district between the 6th and 18th. The average amounts for the month for the various sections were as follows, viz, North Dakota, 0.55 inch; Minnesota, 0.98; Wisconsin, 1.30; Iowa, 0.72; Missouri, 1.56; Indiana, 2.70; and Illinois, 2.69 inches. While these figures do not show an unusual range for the sections, the difference in the amounts for separate stations is more striking. While Cairo, Ill., reported 11.57 inches, Dunseith, N. Dak., reported only a trace during the entire month. The difference between the greatest and the least monthly amounts for the respective sections also shows a wide range except in Indiana. In Illinois there was a difference of 11.03 inches between the greatest and least amounts reported. The heavy rainfall was confined to the extreme southern end of the State and was notably deficient in the northwestern part. The official in charge, local office, U. S. Weather Bureau, Cairo, Ill., reports:

> The monthly record of rainfall for October was broken, as well as the greatest amount of precipitation in 24 hours. In fact the rainfall from 5 p. m. of the 3d to noon of the 6th, 10.95 inches, was phenomenal, and greater than any monthly amount in the history of the station, with the exception of January, 1876. The greatest amount in 24 hours was 5.69 inches, which exceeds all previous records at the station.

The cooperative observer at Carbondale writes:

> In 60 hours we had 9.74 inches of rainfall and as a result the streams had the highest water ever known in this locality. In this section the best corn land is in the river bottoms, and much of it is in corn this year. It was practically all overflowed and much loss sustained. The adjoining counties suffered in like manner, entailing a total loss of $25,000 or more.

Rain was more frequent during the last decade of the month, but the amounts were light after the 23d. The first snow of the season in central and southern districts fell on the 27th, 28th, or 29th. The average precipitation for the district, as shown by the records of 302 stations, was 1.23 inch, which is 0.97 inch below the normal. The greatest amount, 11.57 inches, occurred at Cairo, Ill., and the least, a trace, at Dunseith, N. Dak. The greatest amount in 24 hours, 5.69 inches, occurred at Cairo, Ill., on the 3d and 4th. The greatest amount of snowfall was 10.0 inches unmelted at Plymouth, Ind.; at a number of stations, however, no snow fell. Measurable precipitation occurred on an average of four days.

SUNSHINE AND CLOUDINESS.

The average number of clear days was 18; partly cloudy, 6; cloudy, 7. The duration of sunshine was much above the normal over the central and northern sections, and about the average over the southern district.

WIND.

Northwest winds prevailed over the northern half of the district and southwest winds over the southern half. The frequency of the two directions was about equally divided over the district as a whole. The highest velocity reported was 44 miles per hour from the southeast at Minneapolis, Minn., on the 2d.

MISCELLANEOUS.

Destructive forest and brush fires occurred during the fore part of the month in northern Beltrami and eastern Rossau counties, Minn., causing the loss of scores of human lives and much property. The towns of Baudette and Spooner, on the northern border of Beltrami County, were burned on the 7th.

The warm, dry weather was very favorable for ripening corn, finishing thrashing, digging potatoes, and for all other outdoor operations, except that the soil was too dry for satisfactory plowing and in many places the surface water supply was scarce and the water in shallow wells was low.

Corn husking began during the third week and became general during the fourth week of the month, which is earlier than the average date for beginning that work.

Home-grown strawberries were on the market at Dubuque, Iowa, until the closing week of October, and a few boxes were picked at some time during the month at many places in the eastern and southern counties of Iowa.

Much of the Mississippi bottom lands in southeastern Iowa and northeastern Missouri, which is usually overflowed, was planted to tomatoes this year, and the low stage of the river during the summer and fall and the lateness of killing frost per-

mitted the crop to mature and resulted in one of the largest yields known. It is reported that the canning factories are taxed to their utmost to put up the crop.

Potatoes still in the ground in northwestern Indiana on October 28 and 29 were saved from freezing by the snow covering, which existed in localities where temperatures were sufficiently low to have otherwise injured them.

The phenomenally heavy rains in southern Illinois from the 3d to the 6th, inclusive, caused a great deal of damage in that section of the State as shown by the following items taken from the Cairo, Ill., daily papers of October 6, 1910:

The village of Mounds, 7 miles north of Cairo, was partly under water yesterday although it is high above flood stages of the river. The water on the main streets was from a foot to a foot and a half deep. The rains had swelled the little creek north of town to a good sized stream, and it burst its banks at one point allowing the water to pour through the street.—*Cairo Bulletin.*

Washouts on the railroads leading to Cairo have been numerous. Every line leading out of Cairo to the north was out of commission last evening, except the branch of the Illinois Central, via Thebes and Grand Tower. The Mobile and Ohio was under water so deep between Tamms and Murphysboro that trains could not pass through and had to be detoured by the Thebes branch of the Illinois Central via Thebes and Grand Tower. The Illinois Central main line was under water at Wetaug and Ullin, and at Makanda the water was so deep that passenger train No. 5, the last train to attempt it, barely got through Wednesday afternoon (5th). On the Big Four, at Vienna, the water is so deep that traffic has been suspended, and the train out of Cairo at 3:50 p. m. on the 5th failed to get through last night and came back. The country is flooded and places never before known to be under water have been inundated. During the heaviest of the flood, it is said that water 4 feet deep ran over the Central tracks at Ullin, and with a velocity of 20 miles an hour. At the Sycamore Street subway the water ran in faster than the traction company could pump it out, and 3 cars were burned out in trying to run through it. Water poured into the Chicago Mill and Lumber Company's plant, flooding it.—*Cairo Citizen.*

RIVERS.

All of the principal streams in the district showed but little change during the month.

The streams in Minnesota continue very low, but the Minnesota and Mississippi rivers were rising very slowly toward the end of the month. The question of water supply in some of the cities has become serious. This is particularly true of Moorhead, Minn., and Fargo, N. Dak., where it is feared the Red River of the North, which is now less than 1 foot deep in places, will freeze solid, completely shutting off their water supply. The stage of water in the Red River is the lowest of record covering 10 years, and the lowest since 1871, according to the oldest inhabitants. The Minnesota River, at 0.8 foot a greater portion of the month, was the lowest on record at Mankato. The Mississippi River at St. Paul was 1.8 foot above low water most of the month.—*U. G. Purssell, Section Director.*

The Mississippi River changed very little during the month from Dubuque to St. Paul, and it was the fourth month of extremely low water. The maximum stage at Dubuque was 1.4 foot on the 2d and the minimum stage, 0.9 foot from the 10th to the 15th, inclusive. At the close of the month the Mississippi was falling slowly from Dubuque to St. Paul. Navigation on the upper Mississippi remained practically closed, owing to low water, making four months continuously that steamboats have been unable to run between St. Louis and St. Paul. The Wisconsin River was slightly higher during October than for several months previous.—*J. H. Spencer, Local Forecaster.*

At the close of October, the Mississippi River was slightly lower at all stations in the Davenport river district than at the end of the preceding month.—*J. M. Sherier, Local Forecaster.*

DRAINAGE AND ENGINEERING NOTES.

The survey of the Des Moines River was continued by the United States Army Engineers, under the supervision of Mr. A. O. Rowse. During the month of October topography on both sides of the Des Moines River, covering area subject to overflow, soundings and probings of the river bottom, and levels to determine water slope were taken for a distance of 39 miles, completing the field work down to Keosauqua, which is 154 miles below Des Moines measured along the river. Seventeen miles of topography and soundings and 62 miles of profile were platted, showing the water surface at low stages, river bottom, and both banks. Mr. Rowse also examined Tuttle and Swan lakes in Emmet County, and Storm Lake in Buena Vista County, with a view of establishing storage reservoirs from which the stage of the Des Moines River can be regulated and thereby improve the condition for water-power plants along the course of the river. Tuttle Lake is the source of the eastern branch of the Des Moines River. Swan Lake runs through Jack Creek into the West Fork of the Des Moines, and Storm Lake connects with the Des Moines through the Raccoon River. At a moderate expense the surface of these lakes could be raised sufficiently to increase their storage capacity by about 90,000 acre-feet. The extra supply of water would mean a great deal to the commercial interests of the Des Moines River Valley. While at ordinary stages there is enough water in many places along the river for water power, it is not dependable because of frequent low-water stages. The plan of the army engineers is to keep a steady and regular flow of water sufficient for power purposes.

The following is an extract from an article printed in the Springfield, Ill., Record, October 31, 1910, relative to the drainage of Sny Swamp in Illinois:

The Sny Swamp district forms a fringe of bottom land south of Quincy, in Adams, Pike, and Calhoun counties, Ill., along the Mississippi River. The drainage work is being done by the Sny Island Drainage Company of Adams, Pike, and Calhoun counties under the supervision of Chief Engineer Webb P. Bushnell of Quincy. The Sny, or channel district, supposed to have been the former bed of the Mississippi River, is a low marshy tract lying between the half moon chain of bluffs which begins at Quincy and extends to a point 50 miles south opposite Louisiana, Mo. The idea is to dredge out the old channel, damming it at both ends to keep out water from the main stream, and to establish a gigantic pumping station at the southern end of the ditch. The ditch when completed will be 52 miles long, 50 feet wide, and 8 feet deep, and the time of its construction is estimated at 7 years. The Wabash Railroad bridge near Hulls was removed on October 10, 1910, to allow for the passage of the 280-ton dredge used for excavating the ditch. It was also necessary for the Chicago, Burlington and Quincy Railroad to remove a bridge 3 miles east of Hannibal, and another at Quincy Junction, and a Chicago and Alton bridge will have to be removed at a point 8 miles east of Louisiana, Mo., on the Illinois side. Upon the completion of the work, about 50,000 acres of valuable land will be reclaimed for farming purposes.

TABLE 1.—*Climatological data for October, 1910. District No. 5, Upper Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days. .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota.																				
Amenia	Cass	954	12	52.4	+ 8.1	89[a]	10	20	21†	55	0.76	− 0.67	0.58	0.0	2	22	3	6	nw.	C. E. Wood.
Bottineau	Bottineau	1,638	14	44.0	+ 1.0	85	9	9	28	60	0.51	− 0.64	0.22	T.	5	9	4	18	nw.	J. A. Kemp.
Cando	Towner	1,488	8	48.6	+ 5.8	85[c]	9	21[c]	28	51[c]	0.71	+ 0.36	0.71	0.0	1					G. Bennett.
Crosby	Williams		3	45.7		85	9	12	20	48	0.26		0.22	T.	2	18	4	9	nw.	H. C. Kaschau.
Devils Lake	Ramsey	1,482	4	47.6	+ 7.1	82	10	17	28	39	0.91	− 0.32	0.60	T.	8	14	7	10	nw.	U. S. Weather Bureau.
Donnybrook	Ward	1,760	10	47.9	+ 4.6	88	9	11	20†	62[b]	0.56	+ 0.15	0.22	T.	4				nw.	C. J. De Vore.
Dunseith	Rolette		12	46.0	+ 3.8	82	9	10	20	54	T.	− 0.67	T.	0.0	0	23	3	5	w.	L. H. Trowbridge.
Edmore	Ramsey	1,524	4	46.6		90	9	12	28	53	0.45		0.40	T.	2	17	12	2	w.	H. R. Aslakson.
Forman	Sargent	1,249	15	53.6	+ 8.7	93	10	14	28	53	0.57	− 0.95	0.32	T.	2	20	4	7	nw.	A. Maltby.
Grafton	Walsh	827	12																	H. La Moure.
Granville	McHenry	1,504	3	47.0		87	9	14	20†	51	0.41		0.25	0.0	3	18	13	0	nw.	W. A. Christiansen.
Hannah	Cavalier	1,568	4	45.2		83	9	9	28	47	0.99		0.49	T.	3	15	6	10	nw.	J. Moffatt.
Hansboro	Towner		2	46.2		83	9	14	28	44	0.42		0.30	0.0	5	20	7	4	nw.	Geo. Dale.
Hillsboro	Traill	901	4	50.6		88	17	20	21	45	0.48		0.34	T.	5	16	7	8	s.	M. H. Norman.
Lakota	Nelson	1,519	3	45.4		81	10	13	20	46	0.40		0.27	T.	5				nw.	C. R. Pettes.
Langdon	Cavalier	1,615	14																	J. Woolner.
Larimore	Grand Forks	1,134	14	49.8	+ 5.6	82[a]	16	18	21	40[a]	0.97	− 0.35	0.67	T.	2	16	4	11	w.	Reuben Gray.
Lisbon	Ransom	1,091	5																	H. K. Adams.
McKinney	Ward	1,640	15	47.0	+ 5.4	89	9	11	28	55	0.20	− 0.47	0.20	T.	1	11	12	7	nw.	N. P. Swenson.
Manfred	Wells	1,605	8	47.7		88	10	15	28	47	0.79		0.50	T.	3	14	13	4	sw.	P. B. Anderson.
Mayville	Traill	975	14																	N. C. McDonald.
Minot	Ward	1,557	11	48.0	+ 3.4	89[a]	9	16	28†	52[a]	0.67	− 0.14	0.46	0.0	3	19	4	8	w.	Wm. J. Farris.
Minto	Walsh	820	16	48.8	+ 6.6	84	16	19	20†	46	0.73	− 0.45	0.49	0.0	2	19	4	8		S. S. Marsh.
Oriska	Barnes	1,270	4	50.4		88	10	15	20	47[b]	0.21		0.09	T.	3				nw.	W. E. Williams.
Park River	Walsh	998	6	48.3		84	16	20	20†	43[a]	0.75		0.70	0.0	2					A. Heyward.
Pembina	Pembina	789	11																	C. W. Shumaker.
Power	Richland	1,020	17	49.8	+ 5.8	88	10†	17	21	51	0.64	− 1.06	0.64	T.	1	14	10	7	w.	J. A. Power.
Pratt	McHenry		5	46.4		86	16	10	28†	59	0.85		0.60	0.0	2	18	9	4	nw.	C. H. Butts.
Towner	do			47.6		85	9†	12	20†	48	0.50		0.25	T.	2	15	11	5	nw.	Belle Bagley.
University	Grand Forks	830	18	47.9	+ 4.2	85	10	16	20	48[a]	0.28	− 1.16	0.12	0.0	2				nw.	W. R. Holgate.
Wahpeton	Richland	962	18																	E. G. Burch.
Walhalla	Pembina	966	5																	C. H. Lee.
Westhope	Bottineau		3																	C. W. Clark.
Willow City	do	1,471	16	45.4	+ 3.2	85	9	11	20†	52[a]	0.33	− 0.22	0.33	0.0	1				w.	M. A. Ostby.
Minnesota.																				
Albert Lea	Freeborn	1,229	20	53.1	+ 5.0	90	11	16	29	45	1.40	− 0.69	1.00	T.	3	14	13	4	nw.	Edward Carey.
Alexandria	Douglas	1,391	16	50.3	+ 4.9	86	17	20	29	42	1.47	− 0.19	1.15	0.1	4	13	4	14	nw.	P. O. Unumb.
Angus	Polk	870	8	47.4		82	10	15	20	49	0.39		0.30	T.	2	6	13	12	n.	John Nadvornik.
Bagley	Clearwater		4	47.1		84	17	16	29	59	0.69		0.40	0.5	4	11	16	4	sw.	Jens Nelson.
Baudette	Beltrami	1,084	1																	Franz W. Schmidt.
Beardsley	Bigstone	1,090	17	55.6[c]	+ 9.1	94[c]	2	23	28†	47[c]	1.24	− 0.69	0.88	0.0	3	13[c]	9[c]	6[c]	nw.	Roy A. Smith.
Beaulieu	Mahnomen	1,200	8																	Elizabeth S. Cooper.
Bird Island	Renville	1,039	20	53.3	+ 5.4	86	2†	16	29	45	1.00	− 0.82	0.37	T.	6	18	3	10	sw.	Dr. F. L. Puffer.
Caledonia	Houston	1,179	17	51.4	+ 2.8	79	16†	23	29†	36	0.65	− 2.00	0.53	0.2	5	21	3	7	sw.	W. D. Belden.
Campbell	Wilkin	984																		J. T. Neisess.
Cass Lake	Cass	1,300	4								1.65		1.60	0.5	2					C. W. Burns.
Collegeville	Stearns	1,282	17	53.6	+ 5.9	84	17	23	29	35	0.52	− 1.45	0.25	0.1	5	19	5	7	sw.	Fridolin Tembreul.
Crookston	Polk	863	20	48.2	+ 4.5	80	17	22	20	37	0.45	− 1.30	0.40	T.	2	16	4	11	s.	A. G. Anderson.
Detroit	Becker	1,364	14	49.4	+ 5.7	87[a]	17	22	28†	49[a]	0.69	− 1.59	0.50	T.	3	22	2	7	s.	George W. Peoples.
Fairmont (near)	Martin	1,240	23	52.8	+ 5.1	84	11	19	29	34	0.82	− 0.96	0.40	T.	3	17	10	4	s.	W. F. Wherland.
Faribault	Rice	1,003	13	52.0	+ 2.4	86	11†	16	29	43	0.68	− 2.10	0.20	0.2	7	18	6	7	nw.	Dr. A. R. T. Wylie.
Farmington	Dakota	902	22	53.7	+ 6.2	86	15†	28	29	41	1.67	− 0.92	1.28	T.	4	17	6	8	nw.	D. F. Akin.
Fergus Falls	Ottertail	1,210	18	50.9	+ 4.8	83	17	24	29	33	1.47	− 0.22	0.67	0.3	8	14	12	5	nw.	Chas. E. Kissenger.
Fort Ripley	Crow Wing	1,136	4	50.1		86	17	12	29	47	0.66	− 0.81	0.30	T.	4	20	1	10	nw.	J. J. Tucker.
Fosston	Polk	1,289	1	49.2		86	17	18	28	39	0.53		0.25	0.1	5	19	6	6	nw.	O. N. Hem.
Fram	Marshall			47.6		80	17	15	6	62[b]	1.36		0.57	T.	4	7[b]	16[b]	6[b]	w.[b]	A. W. Clark.
Glencoe	McLeod	1,000	14	54.3	+ 7.4	86	2	18	29	40	1.06	− 1.77	0.50	T.	4	17	11	3	sw.	C. G. Selvig.
Grand Meadow	Mower	1,338	23	52.4	+ 5.7	89	16	14	29	41	0.83	− 1.69	0.53	T.	4	18	7	6	sw.	C. F. Greening.
Hallock	Kittson	815	11	46.2	+ 2.6	79	9†	15	28	46	1.75	+ 0.61	1.10	T.	4	20	1	10	s.	D. A. Robertson.
Halstad	Norman	870	4	48.6		89	17	18	28	49	1.06		0.65	0.0	5	16	9	6	sw.	Aaron G. Holstrom.
Hinckley	Pine	1,050	5	50.8		85	17	17	29	45	1.26		0.84	0.0	4	8	12	11	sw.	W. R. Newman.
International Falls	Koochiching	1,112	2	46.2		81	18	15	29	44	3.47		1.69	3.0	5	15	10	6	sw.	Rees Roe.
Kelliher	Beltrami		3	48.3		83	17	18	29	47	1.87		1.05	0.2	6	8	18	5	sw.	A. Gilmour.
Lake Crystal	Blue Earth		3	52.8		86	11	15	29	40	0.53		0.20	T.	3	21	3	7	s.	W. P. Cobb.
Leech Lake Dam	Cass	1,301	22	47.3	+ 4.5	81	17	15	29	45	1.53	− 0.54	0.83	0.0	8	4	19	8	w.	Hans Olson.
Little Fork	Koochiching			45.2		86	17	12	29	48	3.33		1.90	1.0	4	22	2	7		O. C. Olson
Long Prairie	Todd	1,299	18	50.4	+ 5.3	90	17	11	23	50	0.55	− 1.71	0.22	T.	3	16	8	7	sw.	R. M. Sheets.
Lynd (2)	Lyon	1,175	18	53.4	+ 5.6	90	11	19	29	49	1.28	− 0.57	0.87	0.8	4	22	7	2	sw.	J. W. Rouse.
Mankato	Blue Earth	747	11								0.74	− 0.94	0.33	T.	4	17	5	9	sw.	Sadie H. Blake.
Mapleplain	Hennepin	1,023	18																	G. W. Richards.
Milaca	Millelacs	1,072	13	49.8	+ 7.1	84	17	14	29	47	0.40	− 2.67	0.21	0.4	4	11	14	6	nw.	C. H. Foss.
Milan	Chippewa	955	16	51.0	+ 4.2	87	17	18	29	45	0.79	− 1.15	0.53	T.	3	8	20	3	se.	O. K. Opjorden.
Minneapolis	Hennepin	918	19	54.0	+ 4.2	84	17	23	29	33	0.86	− 1.72	0.43	0.1	7	16	7	8	s.	U. S. Weather Bureau.
Montevideo	Chippewa	900	20	54.0	+ 6.3	89	2†	20	29	45	0.77	− 1.10	0.28	0.8	5	17	10	4	nw.	Lloyd G. Moyer.
Moorhead	Clay	935	29	50.4	+ 7.6	90	17	21	28	44	0.55	− 1.52	0.38	T.	6	13	11	7	nw.	U. S. Weather Bureau.
Mora	Kanabec		5	49.4		86	17	18	29	48	0.67		0.33	0.7	7	19	7	5	w.	Hans Peterson.
Morris	Stevens	1,170	25	51.0	+ 5.1	85	17	20	29	40	0.92	− 0.60	0.40	T.	6	22	2	7	nw.	D. T. Wheaton.
New London	Kandiyohi	1,215	16	50.6	+ 2.9	82	17	26	31	34	0.77	− 1.05	0.56	T.	4	24	5	2	nw.	Harold Swenson.
New Richland	Waseca	1,180	16	53.2	+ 4.3	88	11	18	29	42[a]	0.88		0.45	T.	4	19[a]	6[a]	5[a]	sw.	N. O. Tyrholm.
New Ulm	Brown	791	30	54.0	+ 5.6	90	15	18	29	47	0.59	− 1.51	0.27	T.	4	15	2	14	s.	Andrew J. Eckstein.
Osakis	Douglas	1,343	3	51.4		86	17	16	29	41	0.80		0.46	0.2	6	14	7	10	w.	J. B. Johnson.
Park Rapids	Hubbard	1,426	20	49.5	+ 6.9	87[b]	17	20[b]	29	49[b]	1.93	− 0.02	1.43	0.1	8	14	4	13	s.	Dr. P. A. Walling.
Pine River Dam	Crow Wing	1,251	23	50.5	+ 6.6	87	17	18	29	41	0.60	− 1.92	0.40	1.5	3	14	14	3	nw.	Neil McKay.
Pokegama Falls	Itasca	1,280	23	47.8	+ 6.4	84	17	21	6†	43	0.51	− 1.64	0.18	T.	4	17	9	9	w.	Arthur L. Mampel.
Red Lake	Beltrami	1,152	2	49.4		84	17	21	21†	37	0.83		0.40	0.0	3	13	14	4	w.	A. C. Goddard.
Red Wing	Goodhue	680	14								0.72	− 2.29	0.28	T.	7	17	3	11	w.	Louis Bach.
Redwood Falls	Redwood	1,050	3	55.2		88	2†	28	28†	41	1.05	− 0.27	0.52	1.1	5	21	6	4	nw.	N. B. Anderson.
Reeds Landing	Wabasha	681	15								0.59	− 2.89	0.26	0.0	4	18	2	11	se.	John Deschneau.
Rochester	Olmsted	991	6	51.6		89	11	16	29	51	0.42		0.26	0.0	2	19	1	11	s.	S. R. Case.
Roseau	Roseau	1,040	3	47.0		81	10	16	28	43	1.52		0.80	T.	4	23	5	3	w.	A. Waag.
St. Charles	Winona	850	19	51.2	+ 3.2	86	16	17	29	42	0.46	− 2.50	0.28	T.	2	21	4	6	se.	S. W. Gleason.
St. Cloud	Sherburne	1,020	32	53.0	+ 3.2	87	17	16	29	41	0.47	− 2.15	0.16	T.	4	19	3	9	nw.	Jos. H. Capser.
St. Paul	Ramsey	837	39	53.6	+ 5.5	83	17	23	29	34	0.75	− 1.59	0.40	0.5	6	14	10	7	s.	U. S. Weather Bureau.
St. Peter	Nicollet	825	17	59.0	+ 9.6	90	11	26	29	60	0.24	− 2.29	0.17	0.0	2	8	9	8	nw.	Chas. C. Cavanaugh.
Sandy Lake Dam	Airkin	1,234	17	48.8	+ 4.5	82	17	22	29	41	0.86	− 1.36	0.45	0.0	5	13	8	10	se.	U. S. Engineer Corps.
State Sanatorium	Cass		3	49.2		86	17	18	29	35	1.35		1.10	T.	4	20	5	6	w.	Walter J. Marclacy.
Stillwater	Washington	694	5								0.64		0.40	0.0	6	16	2	13	nw.	Oscar Ostrom.

TABLE 1.—*Climatological data for October, 1910. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Minnesota—Cont'd.																				
Taylors Falls	Chisago	759	3	53.2	.....	84	17	20	29	41	1.24	.....	0.48	0.5	5	15	7	9	s.	Mpls. Gen. Elec. Co.
Warroad	Roseau	1,069	1	46.2	.....	78	16	15	29	46	1.63	.....	1.20	T	4	23	2	6	w.	John H. Sawyer.
West Concord	Dodge	1,232	1	53.1	.....	87	11	18	29	40	0.12	.....	0.10	T.	2	18	8	5	sw.	H. H. Orcutt.
Willow River	Pine	1,046	12																	J. A. Brandt.
Windom	Cottonwood	1,336	4	53.4	.....	90	11	15	28†	48	0.79	.....	0.56	0.8	4	14	13	4	s.	Taber C. Richmond.
Winnebago	Faribault	1,100	11	54.6	+ 4.9	92	12	16	29	42	0.30	− 2.24	0.20	T.	2	22	5	4	se.	H. H. Haight.
Winnibigoshish	Itasca	1,300	22	49.0	+ 5.6	82	17	22	29	39	1.10	− 0.87	0.71	0.5	6	16	7	8	nw.	John Duncan.
Winona	Winona	700	15	54.4	+ 6.7	85	15	22	29	40	0.87	− 1.08	0.67	T.	5	21	2	8	s.	Perry C. Meyrs.
Worthington	Nobles	979	15	52.2	+ 4.1	86	16	20	29	41	0.98	− 1.13	0.66	1.2	3	21	1	9	sw.	Milton P. Mann.
Zumbrota	Goodhue	917	15																	W. C. Rowell.
South Dakota.																				
Milbank	Grant	1,148	18	52.5	+ 5.0	93	2	21	29	51	2.62	+ 0.97	2.25	T.	3	17	1	13	nw.	I. T. Patridge.
Wisconsin.																				
Antigo	Langlade	1,489	16	49.3	+ 4.0	80	17	20	29	39	3.12	.....	1.00	T.	6	16	1	14	w.	Elton C. Larzelere.
Barron	Barron	1,115	18	49.0	+ 3.3	82	17	17	29	40	1.54	− 1.30	0.63	0.5	5	21	6	4	s.	Wm. A. Kent.
Beloit	Rock	750	23	55.7	+ 4.9	80	16	22	29	36	0.93	− 1.15	0.40	T.	4	22	0	9	w.	Smith Observatory.
Big St. Germain Dam§	Vilas	1,590	1	47.8	.....	82	17	15	29	46	1.73	.....	0.67	2.0	8	18	7	6	nw.	Oscar Brehmer.
Brodhead	Green	812	12	55.2	+ 3.2	87	16	17	29	40	0.77	− 1.30	0.50	0.0	3	20	7	4	nw.	Hecktore D. Kirkpatrick.
Burnett	Dodge	880	6	52.2	.....	82	17	18	29	37	1.05	.....	0.75	T.	5	16[a]	7[a]	7[a]	sw.	Geo. W. Smith.
Darlington	Lafayette	867	5	52.1	.....	81	18	13	29	38	0.70	.....	0.50	0.0	2	21	0	10	nw.	S. P. Nelson.
Deerskin Dam§	Forest	1,625	1			81	17				1.84	.....	0.68	4.9	8	15	10	6	sw.	Wm. E. O'Neal.
Delavan	Walworth	920	17	53.6	+ 5.4	85	16	17	29	38	1.27	− 0.50	0.51	T.	5	18	5	8	sw.	Elwood S. Austin.
Dodgeville	Iowa	1,116	11																	Geo. W. Butler
Downing	Dunn	983	8	50.6	.....	85	17	22	29†	49[c]	0.22	.....	0.22	T.	1	9[c]	4[c]	15[c]	se.	Eugene F. Stoddard.
Eau Claire	Eau Claire	800	19	52.8	+ 4.2	86	17	21	29	40	1.36	− 1.86	0.62	0.2	8	15	9	7	nw.	Robert D. Whitford
Grand Rapids	Wood	1,021	11	50.5	+ 3.6	83	17	17	29	39	1.59	− 0.26	0.39	T.	7	16	8	7	sw.	Willis B. Raymond.
Grantsburg	Burnett	1,095	19	49.4	+ 2.6	86	15	22	27	47	0.55	− 2.15	0.20	T.	3	13	6	12	sw.	Theodore Olsen.
Hancock	Waushara	1,091	18	52.6	+ 4.2	83	17†	19	29	38	1.22	− 0.99	0.70	T.	4	16	6	9	sw.	Frederick B. Hamilton.
Hatfield	Jackson	973	15	51.2	+ 2.4	83	18†	23	31	46	0.90	− 2.17	0.50	T.	6	18	4	9	s.	Walter S. Woods.
Hayward	Sawyer	1,197	19	48.4	+ 3.3	85	17	17	29	43	0.80	− 2.46	0.37	1.2	5	18	7	6	sw.	William E. Swain.
Hillsboro	Vernon	1,000	19	50.4	+ 2.6	84	16	22	29†	39	0.85	− 1.51	0.35	T.	3	16	10	5	sw.	Emil V. Wernick.
Koepenick	Langlade	1,683	20	48.4	+ 2.6	80	17	12	28	44	3.43	+ 0.26	1.10	4.0	6	.....	.....	.....	sw.	Edward S. Koepenick.
Lac du Flambeau§	Vilas			48.8	.....	80	17	18	28	36	1.96	.....	0.71	5.0	5	14	7	10	n.	W. J. Lovett.
La Crosse	La Crosse	714	38	53.4	+ 3.5	85	16	24	29	38	0.57	− 1.89	0.40	T.	6	15	8	8	s.	U. S. Weather Bureau.
Lake Mills	Jefferson	897	19	52.6	+ 2.9	82	17	19	29	34	0.76	− 1.41	0.46	0.5	6	15	7	9	w.	S. Newton Dexter Smith.
Lancaster	Grant	1,070	20	52.2[d]	+ 2.7	82[c]	17†	20[d]	29[c]	36[d]	1.42	− 0.64	0.78	0.5	4	16[d]	6[d]	5[d]	w.	Edward Pollock.
Long Lake	Oneida	1,592	2	45.1	.....	83	17	18	29	54	2.17	.....	0.70	5.0	9	12	7	12	s.	Louie Frank.
Madison	Dane	974	32	52.6	+ 4.8	81	18	26	29	29	0.63	− 1.79	0.41	0.2	7	14	7	10	sw.	U. S. Weather Bureau.
Mather	Juneau	962	6	49.0	.....	83	17†	19	29	46	1.10	.....	0.48	T.	6	15	8	8	w.	Frank Evans.
Mauston	do	882	14	52.2	+ 2.3	84	18	22	29	40	0.83	− 1.66	0.65	0.0	3	18	7	6	nw.	Eugene L. Hitchcock.
Meadow Valley	do	974	19	51.0	+ 3.1	84	17	19	29	43	1.03	− 1.43	0.60	2.0	5	7	18	6	nw.	Charles H. Johnson.
Medford	Taylor	1,420	19	49.2	+ 3.2	81	17†	12	29	41	2.10	− 1.21	0.85	1.5	4	19	4	8	s.	William Zeit.
Merrill	Lincoln	1,267	4																	Frank M. McElroy.
Minocqua	Vilas	1,604	6	48.0	.....	82	17	15	29	43	1.07	.....	0.50	2.5	8	15	7	9	n.	Benjamin W. Applebee.
Mondovi	Buffalo	738	2	52.2	.....	84	15†	21	29	43	0.83	.....	0.50	T.	5	18	6	7	nw.	Dr. Charles Hebard.
Mount Horeb	Dane	1,226	6	52.2	.....	83	16	20	29	34	0.76	.....	0.45	T.	5	19	2	10	sw.	W. M. Lewis.
Muscoda	Grant	666	1	53.4	.....	87	16	27	29†	42	1.22	.....	0.64	T.	3	16	5	10	s.	Henry Eckstein.
Neillsville	Clark	996	21	51.6	+ 4.7	83	17	14	29	40	1.35	− 1.57	0.59	T.	4	20	0	11	nw.	William Heaslett.
New Richmond	St. Croix	990	5	51.1	.....	86	17	20	29	47	1.03	.....	0.67	T.	4	16	10	5	sw.	Frank A. R. Van Meter.
Osceola	Polk	806	19	50.8	+ 4.0	86	16	22	29	50	0.96	− 1.99	0.32	2.0	5	17	4	10	s.	Charles W. Staples.
Park Falls§	Price	1,492	18	47.8	.....	82	17	11	29	45	1.23	.....	0.43	3.0	7	14	8	9	sw.	Flambeau Paper Co.
Portage	Columbia	809	14	52.8	+ 2.8	83	17†	16	29	42	1.05	− 1.08	0.50	0.0	3	15[b]	2[b]	6[b]	sw.	James Clear.
Prairie du Chien	Crawford	690	23	53.8	+ 1.9	87	16	21	30	45	0.82	− 1.39	0.50	T.	5	18	2	11	s.	Jas. A. Gillis.
Prentice	Price	1,551	12	47.4	+ 2.7	80	17†	5	29	42	1.32	− 1.64	0.40	0.5	6	13	7	11	sw.	Joseph G. Lash.
Rhinelander	Oneida	1,350	4	48.6	.....	81	17†	16	29	44	1.99	.....	0.74	1.5	8	16	4	11	sw.	John Lind.
Sauk City	Sauk	758	2	52.8	.....	82	17	18	29	41	.....	.....	.....	.....	.....	19	3	9	.....	Kilien Derleth.
Shullsburg	Lafayette	1,019	4	52.7	.....	86	17†	18	29	34	0.89	.....	0.47	T.	4	19	2	10	sw.	Harrison B. Chamberlin.
Solon Springs	Douglas	1,083	4	47.9	.....	85	17	20	29	48	1.15	.....	0.40	1.0	4	14[f]	3[f]	8[f]	sw.	John M. Sayles.
Spooner	Washburn	1,104	15	49.6	+ 3.8	82	17	17	29	40	0.87	− 2.10	0.25	1.5	5	19	7	5	s.	Horace A. Bresee.
Stanley	Chippewa	1,082	6	50.6	.....	82	17	18	29	43	1.60	.....	0.50	T.	5	20	4	7	nw.	W. Humphrey Scott.
Stevens Point	Portage	1,113	17	50.0[f]	+ 2.1	83	17	32	31	47[f]	1.60	− 0.93	0.90	0.0	3	15[c]	3[c]	10[c]	nw.	Garry E. Culver.
Sugar Camp Dam§	Oneida	1,582	1								1.83	.....	0.61	7.0	8	.....	.....	.....	w.	Robert Hayes.
Twin Lakes Dam§	Vilas	1,625	1								1.89	.....	3.66	6.0	9	13	12	6	n.	Albert D. Hansen.
Valley Junction	Monroe	930	18	49.6	+ 1.3	82	17	24	29	41	1.71	− 1.11	1.31	1.0	4	14	7	10	w.	Frederick Muermann.
Viroqua	Vernon	1,412	19	53.4	+ 4.1	86	16	22	29	33	0.97	− 1.52	0.56	T.	6	19	6	6	nw.	Henry E. Rogers.
Vudesare	Vilas	1,600	2	46.6	.....	82	17	10	28	45	2.71	.....	1.16	5.5	5	15	11	5	w.	Louis L. Thomas.
Watertown	Jefferson	824	19	53.5	+ 5.0	81	17†	23	29	35	1.00	− 0.91	0.35	T.	6	17	10	4	sw.	Charles J. Salick.
Waukesha	Waukesha	864	14	53.9	+ 3.6	84	17	21	29	38[a]	1.13	− 0.65	0.60	T.	4	15[a]	12[a]	3[a]	sw.	Carroll College.
Wausau	Marathon	1,212	17	52.3	+ 5.4	82	17	20	29	36	2.47	− 0.55	0.77	T.	7	21	4	6	nw.	George H. Halder.
Weyerhaeuser	Rusk	1,297	3	48.3	.....	84	17	13	29	45	1.26	.....	0.45	0.5	6	15	6	10	sw.	Miss Etta Stiles.
Whitehall	Trempealeau	675	18	52.2	+ 3.0	85	15	21	27	46	0.53	− 1.96	0.30	0.0	2	22	0	9	nw.	Hans J. Haugh.
Iowa.																				
Albia§	Monroe	959	12	57.7	+ 4.5	91	2	18	29	49	0.36	− 2.27	0.21	T.	2	23	2	6	sw.	J. I. Chenoweth.
Algona§	Kossuth	1,213	36	53.2	+ 4.5	87	11	15	29	40	1.18	− 0.91	0.75	2.0	5	21	4	6	s.	Dr. F. T. Seeley.
Alta	Buena Vista	1,513	19	54.0	+ 3.7	88	16	20	29	40	0.88	− 1.26	0.50	1.3	4	19	9	3	s.	David E. Hadden.
Amana	Iowa	721	34	53.9	+ 4.0	84	16	18	29	38	0.75	− 1.90	0.27	T.	4	20	6	5	s.	C. Schadt.
Ames	Story	926	34																	Iowa State College.
Baxter§	Jasper	908	10	57.2[c]	+ 4.0	90	16	15	29	38[f]	0.46	− 2.25	0.16	T.	5	22	4	5	nw.	W. R. Vandike.
Belleplaine	Benton	828	20	54.8	+ 4.4	90	16	15	29	43	0.34	− 2.01	0.16	0.0	4	21	4	6	s.	S. P. Van Dike.
Belmond	Wright			52.5	.....	86	2†	15	29	37	1.25	.....	0.86	T.	5	13	11	4	nw.	Geo. P. Hardwick.
Bloomfield§	Davis		3																	C. R. Davis.
Bonaparte§	Van Buren		19	57.9	+ 2.9	90	16	15	29	43	0.65	− 1.11	0.29	T.	3	.....	.....	.....	.....	B. R. Vale.
Boone	Boone	1,134	5	55.4	.....	89	16	20	29	44	0.88	.....	0.37	T.	4	.....	.....	.....	.....	Carl Fritz Henning.
Britt§	Hancock	1,236	13	53.4	+ 3.1	89	11	16	29	43	1.29	− 0.87	0.52	T.	4	21	6	4	s.	L. M. Goodman.
Buckingham	Tama		10								0.40	− 1.70	0.20	0.0	3	.....	.....	.....	.....	J. S. Guynn.
Burlington	Des Moines	544	14	58.7	+ 3.0	91	16	22	30	46	1.01	− 1.21	0.29	T.	5	24	2	5	sw.	Max E. Poppe, jr.
Carroll	Carroll	1,265	20	54.3	+ 3.3	85	1†	20	28	43	0.65	− 1.59	0.33	0.0	3	23	1	7	nw.	Mrs. Jos. J. Wolfe.
Cedar Rapids	Linn	733	28	54.6	+ 3.2	87	16	20	30	38	0.79	− 1.67	0.56	T.	2	22	3	6	s.	W. J. Greene.
Charles City	Floyd	1,015	19	52.4	+ 4.2	85	11	16	29	41	0.36	− 1.67	0.14	T.	4	14	10	7	nw.	U. S. Weather Bureau
Clear Lake§	Cerro Gordo	1,241	12	55.0	+ 3.2	88	16	22	29	43	0.20	− 2.43	0.20	0.0	1	22	0	9	s.	Oscar Stevens
Clinton	Clinton	593	43	54.2	+ 3.7	85	16	18	29	38	0.73	− 1.67	0.50	0.0	6	17	7	7	sw.	Luke Roberts.
Columbus Junction§	Louisa	595	9	57.0	.....	86	16	21	29	35	0.76	.....	0.32	T.	4	23	4	4	sw.	J. B. Johnston.
Davenport	Scott	580	39	57.1	+ 4.5	88	16	24	29	33	0.61	− 1.78	0.46	T.	7	20	6	5	w.	U. S. Weather Bureau.
Decorah	Winneshiek	875	17	52.0	+ 1.8	83	18	18	29	39	0.85	− 1.57	0.65	0.0	2	.....	.....	.....	.....	F. H. Baker.
Delaware	Delaware	1,083	19	52.8	+ 3.8	80	16†	18	29	33	1.15	− 1.05	0.59	0.0	4	20	6	5	nw.	William Ball.
Des Moines	Polk	861	32	56.4	+ 3.9	86	2	20	29	39	0.68	− 2.00	0.42	T.	4	18	4	9	nw.	U. S. Weather Bureau.
De Soto§	Dallas	866	10	56.8	+ 2.7	91	2	16	29	46	0.89	− 1.44	0.48	T.	4	23	0	8	sw.	R. D. Minard.

TABLE 1.—*Climatological data for October, 1910. District No. 5*—Continued

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days. .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Iowa—Cont'd.																				
Dubuque	Dubuque	639	37	55.0	+ 3.0	82	16	24	29	32	0.89	− 1.79	0.66	0.1	5	19	4	8	nw.	U. S. Weather Bureau.
Earlham	Madison		8	56.0		88	16	15	29	40	1.00		0.52	T.	4	21	1	9	nw.	George Phillips.
Elkader	Clayton	727	31	57.7	+ 8.3	85	11†	31	29	36	0.87	− 1.77	0.62	T.	2	22	2	7	nw.	Chas. Reinecke.
Elma	Howard		1	52.7		83	11	21	29	38	0.42		0.16	T.	4	18	10	3	se.	H. A. Moore.
Estherville	Emmet	1,298	15	52.4	+ 3.6	88	11	15	29	46	0.67	− 1.50	0.42	T.	4	19	0	12	s.	A. O. Peterson.
Fairfield	Jefferson		26	55.6°	+ 3.2	84	15	16	29	41°	0.63	− 2.29	0.22	T.	5	25	2	4	sw.	R. Monroe McKenzie.
Fayette‡	Fayette	1,003	20	52.1	+ 5.4	82	11†	11	29	41	0.87	− 1.78	0.81	T.	3	23	4	4	nw.	R. Z. Latimer.
Forest City‡	Winnebago	1,226	16	52.0	+ 2.3	89	11	16	29	45	1.28	− 1.02	0.93	T.	3	22	3	6	s.	J. A. Peters.
Fort Dodge	Webster	1,126	10	54.2	+ 1.9	90	16	21	29	41	1.72	− 1.36	1.32	T.	5	25	6	0	s.	J. F. Monk.
Fort Madison	Lee	516	61								0.87	− 1.75	0.51	0.0	3	20	4	7	sw.	Miss L. A. McCready.
Gilman	Marshall	1,052	11								0.39	− 2.13	0.21	0.0	3					J. L. Wylie.
Grand Meadow	Clayton	1,180	19	53.0	+ 3.8	81	18	19	29	34	0.96	− 1.51	0.51	T.	6	16	10	5	nw.	F. L. Williams.
Greene	Butler		12	53.4	+ 1.3	85	11	15	29	42	0.56	− 1.60	0.20	T.	4	7	17	7	w.	J. L. Cole.
Grinnell	Poweshiek	1,023	18	57.2	+ 6.5	92	16	16	29	41	0.42	− 2.05	0.18	T.	3	20	5	6	w.	D. W. Brainard
Grundy Center‡	Grundy	976	19	55.5	+ 3.7	87	16	19	29	43	0.41	− 2.06	0.41	T.	1	18	0	13	nw.	J. B. Calderwood.
Guthrie Center‡	Guthrie	1,077	15	55.0	+ 2.6	84	2	20	29	35	1.35	− 0.92	0.80	T.	4	21	6	4	sw.	D. G. Beardsley.
Hampton	Franklin	1,135	20	55.6	+ 4.8	91	16	18	29	41	0.78	− 1.65	0.28	T.	3	15	11	5	nw.	E. C. Grenelle.
Humboldt	Humboldt	1,095	22			88	11†	17	29	42	1.38	− 0.51	0.78	T.	5	24	5	2	nw.	Henry S. Wells.
Independence‡	Buchanan	921	46	54.0	+ 4.8	84	11†	15	29	43	0.65	− 1.71	0.25	0.0	3	23	2	6	nw.	George Donohoe.
Indianola	Warren	969	19	57.2	+ 3.5	85	2†	19	29	35	0.42	− 1.68	0.23	T.	4	21	2	8	sw.	John L. Tilton.
Iowa City	Johnson	683	50	54.4	+ 3.3	87	16	16	29†	49	0.57	− 2.21	0.42	0.0	3	21	2	8	nw.	A. G. Smith.
Iowa Falls	Hardin	1,170	17	52.0	+ 2.3	83	2†	15	29	40	0.61	− 1.54	0.25	T.	3	21	2	8	nw.	J. B. Parmelee.
Jefferson‡	Greene		11	55.6		89	16	18	29	45	1.53	− 0.69	1.25	0.0	4					G. W. Jackson.
Keokuk	Lee	547	39	59.2	+ 4.7	86	2	22	29	38	0.81	− 1.68	0.40	T.	5	22	2	7	s.	U. S. Weather Bureau.
Keosauqua	Van Buren	644	18	56.0	+ 1.2	90	16	16	29†	56	0.59	− 1.25	0.26	T.	4	13	11	7		J. H. Landes.
Knoxville‡	Marion	920	15	57.2	+ 3.5	85	2†	20	29	39	0.28	− 2.14	0.20	T.	2	20	4	7	sw.	Casey & Belville.
Lacona	Warren		11								0.97	− 1.74	0.56	0.0	3	7	21	3		J. B. Alter.
Le Claire	Scott	576	10								0.88	− 1.01	0.48	T.	6					Miss M. T. Disney.
Marshalltown	Marshall	947	18	55.1	+ 2.8	91	16	16	29	45	0.37	− 2.01	0.12	T.	4	23	5	3	nw.	Ralph B. Reasoner.
Mason City‡	Cerro Gordo	1,132	13	52.5	+ 2.9	85	11	16	29	44	0.97	− 1.15	0.50	0.0	4	18	9	4	s'	J. S. Mills.
Mount Pleasant‡	Henry	729	29	55.1	+ 2.6	84	16	18	29	38	0.81	− 1.07	0.37	T.	5	22	3	6	sw.	J. W. Edwards.
Muscatine	Muscatine		50								0.66	− 2.38	0.35	T.	5					William Molis
New Hampton‡	Chickasaw	1,169	13	52.2	+ 1.4	82	15†	25	29	39	0.54	− 1.22	0.23	T.	4	20	3	8	s.	A. F. Kemman.
Newton‡	Jasper	944	22	56.0	+ 4.2	85	16	19	29	36	0.44	− 2.29	0.23	0.0	3	20	5	6	w.	J. P. Beatty.
Northwood‡	Worth	1,222	14	51.7	+ 2.0	83	11	16	28	40	0.86	− 1.74	0.55	T.	4	23	2	6	sw.	Chas. H. Dwelle.
Olin‡	Jones	760	12	56.2	+ 5.0	90	16	27	31	50	0.98	− 1.43	0.44	T.	4	21	3	7		C. M. Miles.
Osage	Mitchell	1,184	23	54.0	+ 6.6	87	11†	15	29	41	0.65	− 1.77	0.25	T.	3	17	2	12	nw.	A. D. Bundy.
Oskaloosa‡	Mahaska	843	34	56.2	+ 4.1	87	16	15	29	40	0.31	− 1.89	0.24	T.	3	24	3	4	nw.	Joseph Boyd.
Ottumwa	Wapello	649	15	60.1	+ 5.1	93	16	20	29	43	0.19	− 2.76	0.14	T.	2	7	8	16	w.	W. J. Mesmer.
Pella	Marion	877	8	56.2		89	15	14	29	44	0.29		0.20	T.	3	27	0	4	nw.	John H. Ver Steeg.
Perry‡	Dallas	975	9	55.4		87	16	18	29	41	0.72		0.40	T.	3	20	7	4	sw.	Ed. S. Gray.
Plover	Pocahontas	1,426	14	53.2	+ 2.6	87	16	15	29	43	0.92	− 1.60	0.50	T.	3	25	3	3	s.	J. S. Smith.
Pocahontas	do	1,248	6	53.8		87	11†	19	29	40	0.85		0.38	0.0	4	23	5	3	s.	F. E. Hronek.
Ridgeway‡	Winneshiek	1,215	12	54.8	+ 2.4	89	16	18	29	44	0.64	− 2.53	0.32	0.2	8	20	8	3	s.	Arthur Betts.
Rockwell City‡	Calhoun		14	55.2	+ 3.2	86	16	22	29	40	1.21	− 1.20	0.43	T.	3	23	2	5		C. M. Randall.
Sac City	Sac	1,278	34	55.3	+ 5.3	86	16	26	28	42	0.69	− 1.60	0.44	0.0	3					E. N. Baily.
St. Charles‡	Madison	1,070	9	58.2		89	16	18	29	46	0.77		0.52	T.	5	22	4	5	nw.	R. D. Minard.
Sigourney‡	Keokuk	877	14	56.4	+ 2.1	86	2†	16	29	40	0.29	− 2.27	0.24	T.	3	13	13	5	nw.	J. T. Parker.
Stockport‡	Van Buren		8	55.0		89	16	13	28	47	0.65		0.31	T.	4	23	3	5	s.	C. L. Beswick.
Storm Lake	Buena Vista	1,440	21	56.5°	+ 4.2	87	16	25°	29	32°	0.44	− 1.25	0.41	T.	3					S. B. Fracker.
Stuart	Guthrie	1,216	11	56.2	+ 2.2	83	17	21	28	32	1.07	− 0.90	0.52	T.	3	19	7	5	sw.	J. P. Fox.
Tipton ‡	Cedar	807	11	55.8	+ 3.9	85	16	22	29	32	0.80	− 1.22	0.53	0.0	4	22	3	6	nw.	F. K. Gregg.
Toledo‡	Tama	856	16	54.2	+ 2.1	85	16	15	29	40	0.39	− 1.65	0.22	T.	2	23	2	6	nw.	I. F. Giger.
Wapello‡	Louisa	588	12	57.2	+ 2.8	83	2	28	29	44	0.78	− 1.09	0.29	0.0	4	22	5	4	s.	G. W. Schofield.
Washington	Washington	709	28	55.7°	+ 3.5	88	16	18	29	40	0.54	− 1.50	0.34	0.0	3					Wm. A. Cook.
Waterloo	Black Hawk	862	27	54.6	+ 4.4	86	16	18	29	43	0.37	− 1.89	0.25	T.	3	20	6	5	s.	M. L. Newton.
Waukee	Dallas	1,039	7	55.8		85	2†	20	29	42	0.89		0.41	T.	6	21	6	4	sw.	Samuel F. Foft.
Waverly‡	Bremer	948	14	53.8	+ 1.8	87	13	16	29	42	0.38	− 1.93	0.20	0.0	3					H. S. Hoover.
Webster City‡	Hamilton		5	54.1		85	2†	15	29	40	0.97		0.64	T.	3	22	6	3	nw.	C. D. Carpenter.
West Bend‡	Palo Alto	1,197	17	53.1	+ 4.2	87	11	17	29	40	0.88	− 0.96	0.43	T.	5	17	9	5	s.	Joseph Dorweiler.
Whitten‡	Hardin	1,036	13	53.8	+ 2.2	85	16	16	29	38	0.43	− 1.89	0.23	T.	3	18	5	8	nw.	F. P. Butler.
Winterset‡	Madison	1,129	19	56.8	+ 3.5	85	2†	22	29	32	1.04	− 1.20	0.71	T.	4	19	5	7	s.	Robert S. Cooper.
Missouri.																				
Gorin	Scotland	700	24								0.60	− 1.75	0.32	T.	3	22	3	6	sw.	J. W. Pulliam.
Hannibal	Marion	534	18	58.2	+ 2.3	86	2	22	29	40	1.14	− 0.50	0.62	T.	5	22	3	6	sw.	U. S. Weather Bureau.
Louisiana	Pike	500	32	57.2	+ 1.3	85	2†	17	29	47	1.08	− 1.19	0.40	T.	6	24	3	4	nw.	J. T. Farrell.
Mexico	Audrain	797	32	58.0	+ 1.5	89	2	20	29	41	1.22	− 1.00	0.46	T.	5	26	0	5	s.	J. F. Llewellyn.
Steffenville	Lewis	576	17	60.6	+ 3.8	91	2	20	29	39	1.65	− 0.32	1.00	T.	4	24	3	4	w.	Frank Hall.
Sublett	Adair	1,000	30	57.9	+ 2.7	86	18	15	29	34	T.	− 2.76	T.	T.	0	21	8	2	sw.	Lewis Spriggs.
Warrenton	Warren	863	20	59.2	+ 3.8	87	1†	22	29	47	3.63	+ 1.13	1.45	0.0	6	19	7	5	s.	Dr. J. H. Frick.
Indiana.																				
Collegeville	Jasper		11	56.8	+ 2.8	85	3†	21	29	36	2.35	+ 0.38	1.50	T.	4	19	6	6	sw.	Prof. L. C. Klosterman.
Knox	Starke	716	5	56.4		82	3†	22	29	31	2.78		1.58	3.5	8	18	9	4	s.	W. R. R. Tatman.
Laporte	Laporte	810	14	54.8	+ 1.6	82	3	28	30	37	2.54	+ 0.18	1.19	1.0	8	18	4	9	nw.	Wm. N. Walton, jr.
Plymouth	Marshall	790	7	55.6		83	17	23	29	33	3.12		1.31	10.0	8	16	10	5	sw.	J. W. Siders.
Illinois.																				
Aledo	Mercer	738	10	56.5	+ 3.1	85	16	21	29	38	0.87	− 1.04	0.33	T.	5	16	12	3	s.	Wm. B. Frew.
Alexander	Morgan	670	17	58.4	+ 2.5	85	14	21	29	40	1.72	− 0.12	1.06	T.	7	22	4	5	sw.	George H. Hall.
Antioch	Lake	861	9	55.4		84	18	21	29	37	2.37		1.50	T.	3	19	6	6	w.	J. C. James, jr.
Astoria	Fulton	650	11	57.0	+ 3.5	85	2	22	29	43	1.92	+ 0.10	1.25	T.	5	22	4	5	nw.	Ed. V. Bohl.
Aurora	Kane	687	31	54.2	+ 2.8	82	16†	17	29	33	1.20	− 1.31	0.64	T.	4	14	8	8	sw.	W. Holden.
Bement	Piatt	700	3	59.8		86	16	22	29	41	1.79		0.58	T.	5	24	4	3	s.	Rev. C. S. Adams.
Benton	Franklin	598	8																	F. H. Stamper.
Bloomington	McLean	840	19	58.2	+ 2.5	85	14†	20a	29	39a	1.23	− 0.36	0.45	T.	4	22	2	7	sw.	Prof. H. N. Pearce
Cairo	Alexander	359	33	61.4	+ 2.3	91	1	28	29	21	11.57	− 8.94	5.69	0.0	8	20	4	7	ne.	U. S. Weather Bureau.
Carbondale	Jackson	412		60.7		92	1	29	29	39	10.27	+ 7.33	4.42	0.0	6	19	7	5	sw.	State Normal University.
Carlinville	Macoupin	663	20	59.6	+ 3.2	90	1	21	29	41	2.57	+ 0.19	1.00	0.5	6	24	3	4	s.	R. O. Purviance.
Clinton	Dewitt	727		58.2		85	16†	21	29	42	2.29		1.33	T.	7	22	5	4	w.	J. F. Ziegler.
Coatsburg	Adams	763	18	56.6	+ 3.9	83	2	22	29	35	1.02	− 1.33	0.32	0.0	5	25	0	6	s.	Dr. J. R. Lambert.
Cobden	Union	656	27	62.7	+ 2.4	95	1	25	29	40	11.43	+ 7.98	5.10	0.0	5	19	6	6	s.	John Buck.
Dakota	Stephenson	929	5	54.3		83	16	10	29	34	0.59		0.24	T.	7	17	9	5	sw.	Rev. G. W. Kerstetter.
Decatur	Macon	685	19	57.5	+ 1.9	87	16†	22	29	40	2.20	+ 0.16	0.98	T.	6	24	2	5	nw.	Prof. J. H. Coonradt.
Dixon	Lee	725	20	55.8	+ 4.1	87	16	19	29	37	0.54	− 1.36	0.28	T.	5	19	9	3		H. V. Bardwell.
Du Quoin	Perry	459	22																	G. H. Knetzger.
Dwight	Livingston	600	17	57.6	+ 5.0	87	16	20	29	37	1.44	− 0.23	0.63	1.0	6	21	4	6	sw.	Ed. O. Welch.
Elgin‡	Kane	716	3	55.7		85	16	22	29	35	1.21		0.58	T.	6	7	23	1	sw.	Elgin Observatory.
Galva	Henry	842	18	56.6	+ 3.5	87	16	18	29	45	1.17	− 0.71	0.70	T.	5	22	2	7	sw.	Prof. F. U.White.

TABLE 1.—*Climatological data for October, 1910. District No. 5*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Illinois—Cont'd.																				
Greenville	Bond	635	32	59.2	+ 2.7	84	1†	28	29	36	5.05	+ 2.30	3.02	T.	5	19	5	7	sw.	M. S. Oudyn.
Griggsville	Pike	650	25	59.2[d]	+ 3.3	85[b]	2†	21[c]	29	38[c]	1.65	− 0.56	1.01	T.	4	20	5	6	nw.	Geo. F. Kneeland.
Halfway	Williamson	360	14																	E. L. Hearn.
Havana	Mason	475	18	59.8	+ 3.8	87	2	25	29	39	1.51	− 0.32	0.50	0.0	5	22	7	2	sw.	F. & C. Borgelt.
Henry	Marshall	500	22	57.2	+ 4.5	86	16	18	29	40	1.48	− 0.51	0.95	T.	4	24	0	7	nw.	Dr. F. A. Powell.
Hillsboro	Montgomery	675	16	60.3	+ 2.8	87	15	23	29	38	5.00	+ 2.14	2.50	T.	5	23	0	8	s.	Ira L. Woodward.
Joliet	Will	541	19	56.6	+ 4.4	86	16	21	29	39	1.68	− 0.17	1.16	T.	3	19	3	9	sw.	F. M. Muhlig.
Kishwaukee	Winnebago	730	22	55.1	+ 3.8	87	16	18	29	39	0.84	− 1.74	0.33	T.	8	18	7	6	sw.	Geo. Stevens.
La Grange	Cook	657	18	55.6	+ 3.6	84	16†	22	29†	37	1.44	− 0.03	0.81	T.	4	17	10	4	sw.	Prof. F. E. Sanford.
La Harpe	Hancock	698	31	57.3	+ 2.8	85	16	17	29	48	0.75	− 1.70	0.36	T.	4	20	2	9	sw.	Jno. S. Campbell.
Lanark	Carroll	883	21	53.9	+ 3.6	85	16†	10	29	42	0.66	− 1.35	0.34	T.	6	24	3	4	s.	M. N. Wertz.
La Salle	La Salle	536	33	56.8	+ 4.9	86	16	22	29	34	1.03	− 1.55	0.56	0.2	7	20	4	7	w.	U. S. Weather Bureau.
Lincoln	Logan	482	22	56.7	+ 1.8	85	2	18	29	42	1.40	− 0.43	0.70	T.	5	22	5	4	s.	Prof. C. S. Oglevee.
Martinton	Iroquois	633	23	56.9	+ 4.2	87	16	20	29	41	2.87	+ 0.72	1.15	T.	5	19	6	6	sw.	Jos. H. Peltier.
Mascoutah	St. Clair	425	20	60.9	+ 4.1	91	1†	24	29	46	4.54	+ 1.91	2.87	T.	5	14	13	4	se.	Geo. Henrich.
Minonk	Woodford	745	17	58.5	+ 4.4	88	16	18	29	43	0.93	− 0.55	0.55	T.	3	21	6	4	sw.	O. M. Davison.
Monmouth	Warren	784	18	58.2	+ 4.4	88	16	21	29	48	0.86	− 0.86	0.30	0.0	6	22	3	6	sw.	Hugh R. Moffet.
Morrison	Whiteside	685	16	55.2	+ 2.2	88	16	16	29	40	0.64	− 1.24	0.32	T.	7	22	4	5	sw.	S. A. Maxwell.
Morrisonville	Christian	638	11	57.7	+ 1.2	84	15†	20	29	41[a]	2.44	+ 0.12	1.14	0.3	5	24	4	3	nw.	J. D. Lowis.
Mount Vernon	Jefferson	511	16	59.8	+ 1.8	90	1	26	29†	38	6.65	+ 4.25	4.18	0.0	7	19	5	7	s.	Theo. P. Stelle.
Oregon	Ogle	702	1	56.2		86	16	18	29	36	0.72		0.40	T.	3	22	1	8	s.	Samuel Ray.
Ottawa	La Salle	500	24	56.5	+ 3.4	86	14	22	29	37	1.25	− 0.67	0.59	T.	4	22	3	6	sw.	Miss M. M. Harris.
Pana	Christian	692	24	59.4	+ 4.1	84	16†	22	29	35	2.11	− 0.30	1.15	T.	5	25	2	4	sw.	C. W. Sibley.
Peoria	Peoria	609	33	56.7	+ 4.7	85	16	21	29	38	1.69	− 0.88	0.96	T.	6	21	7	3	s.	U. S. Weather Bureau.
Pontiac	Livingston	546	8	58.6		85	16†	21	29	40	1.69		0.69	T.	4	20	5	6	sw.	Geo. Butterworth.
Riley	McHenry	956	51	55.0	+ 6.2	84	16†	18	29	32	1.51	− 0.69	0.83	T.	7	16	10	5	sw.	John West James.
Rockford	Winnebago	763	18	54.6	+ 4.2	84	16	21	29	37	1.03	− 1.65	0.26	T.	9	24	0	7	.....	Hosmer C. Porter.
Rushville	Schuyler	670	19	59.0	+ 4.2	85	16†	21	29	39	1.19	− 0.45	0.92	T.	3	17	5	9	s.	H. F. Dyson.
St. Charles	Kane	700	15	55.8	+ 3.7	87	16	18	29	38	1.19	− 0.68	0.45	T.	5	14	14	3	sw.	Dr. Wm. H. Bishop.
St. Peter	Fayette			60.2		87	17	24	29	35[a]	4.11		1.75	T.	5	21	5	5	nw.	M. L. Lansford.
Sparta	Randolph	538	24	59.8	+ 2.4	90	1	24	29	36	4.62	+ 2.19	2.18	0.0	6	23	6	2	s.	Jas. A. Caldwell.
Springfield	Sangamon	644	33	58.2	+ 3.6	82	16	29	29	38	1.74	− 0.86	0.87	T.	7	21	4	6	s.	U. S. Weather Bureau.
Streator	La Salle	626	17	56.7	+ 2.9	87	13†	20	29	42[b]	1.43	− 0.01	0.75	T.	4	21	3	7	sw.	Edw. F. Sweetser.
Sullivan	Moultrie	530	10	59.0	+ 2.8	87	16†	21	29	42	2.09	− 0.28	0.68	T.	5	22	6	3	sw.	C. A. Corbin.
Sycamore	De Kalb	855	30	54.6	+ 4.3	87	16	18	29†	45	2.04	− 0.50	1.53	T.	5	18	4	9	sw.	Miss E. J. Davis.
Tiskilwa	Bureau	798	16																	F. I. Smucker.
Walnut	....do	717	19	57.7	+ 3.1	87	16	20	29	36	0.91	− 0.66	0.53	T.	6	20	6	5	s.	O. C. Nussle.
White Hall	Greene	573	2	57.1		83	2†	19	29	43	1.89		0.80	T.	7	23	3	5	sw.	Dr. R. A. Pritchett.
Windsor	Shelby	681	11	58.6	+ 5.2	88	16	21[a]	29	44[a]	2.61	+ 0.63	1.05	0.1	6	19	6	6	sw.	Herbert Rose.
Winnebago	Winnebago	900	23	54.9	+ 3.7	86	16	18	29	37	0.78	− 1.38	0.45	T.	5	22	3	4	sw.	Frank Osborn
Yorkville	Kendall	584	23	54.7	+ 4.4	83	16	19	29	37	1.32	− 0.96	0.72	T.	5	20	2	9	w.	Herman A. Grimwood.
Zion	Carroll	938	16	53.8	+ 2.3	88	16	17	29	36	0.78	− 1.15	0.30	1.0	4	25	0	6	w.	Robt. F. Gillogly.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
Estimated by observer.
Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 5, Upper Mississippi Valley.*

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
North Dakota.																																	
Amenia	Red																		.18	.58													0.76
Bottineau	Mouse			T.		.05								.02					.02	.22							.20	T.	T.				0.51
Cando	Sheyenne																			.71						T.							0.71
Crosby	Mouse		.04		T.	T.								T.												.22		T.				T.	0.26
Devils Lake	Sheyenne		.09		.02								.07					.02	.57	.03					.05	.06							0.91
Donnybrook	Mouse		.10		.08													T.	.16							.22	T.	T.					0.56
Dunseith	...do																		T.						T.		T.	T.					T.
Edmore	Sheyenne													T.					.40	.05					T.	T.							0.45
Forman	...do																			.25	.32									T.			0.57
Grafton	Red																																
Granville	Mouse		.02											T.				T.	.14							.25							0.41
Hannah	Pembina			.24	T.								T.	.26				T.	.49						T.		T.						0.99
Hansboro	Red			.02	.03	.03								.04						.30													0.42
Hillsboro	...do																	.02		.34					.03	.07		.02					0.48
Lakota	Sheyenne				.01														.27	.01					.06	.05	T.	T.					0.40
Langdon	Pembina																																
Larimore	Red																		.67	.30								T.					0.97
Lisbon	Sheyenne																																
McKinney	Mouse				T.														T.							.0		T.					0.20
Manfred	Sheyenne																	T.	.50	.20						.09		T.					0.79
Mayville	Red																																
Minot	Mouse			T.		T.													.03	.46							.18						0.67
Minto	Red												.24						.49														0.73
Oriska	Sheyenne												.04					.68	.09						T.	T.							0.21
Park River	Red																		.73	.05													0.75
Pembina	...do																																
Power	Sheyenne																		.64					T.				T.					0.64
Pratt	Mouse																		.60							.25							0.85
Towner	...do																	T.	.25							.25		T.					0.50
University	Red																		.12	.11					.05								0.28
Wahpeton	...do																																
Walhalla	Pembina																																
Westhope	Mouse																																
Willow City	...do																		.33							T.							0.33
Minnesota.																																	
Albert Lea	Mississippi			20																1.00	.20	T.						T.					1.40
Alexandria‖	...do		T.	.26																1.15		T.				.03	T.	.03	T.				1.47
Angus	Red				T.									.09					T.	.30					T.	T.		T.					0.39
Bagley	...do																		.40	.20					.08			.01					0.69
Baudette	Rainy																																
Beardsley	Minnesota		T.													.04			.88	.32						T.						T.	1.24
Beaulieu	Red																																
Bird Island	Minnesota		.32	37											T.				.07	.05		.12			.07		T.	T.					1.00
Caledonia‖	Mississippi			.06	.01																T.	.53	.03				T.		.02				0.65
Campbell‖	Red																																
Cass Lake‖	Mississippi																			1.60					T.	T.			.05				1.65
Collegeville	...do		.25	.15												T.			T.	.10		T.			T.		.01	.01					0.52
Crookston‖	Red													T.					T.	.40						.05		T.					0.45
Detroit‖	...do		.04		T.	T.														.50				T.		T.	.15	T.	T.				0.69
Fairmont (near)	Minnesota			.32															.40			.10			T.	T.	T.	T.					0.82
Faribault	Mississippi		T.	.17															.19	.03	.05	.20			.02	.01		T.	T.				0.58
Farmington	...do		1.28	.05															T.	.15	T.	.19			T.		T.	T.	T.				1.67
Fergus Falls	Red		T.	.26															.67	.41				.01	.07	.02		.02	.01			T.	1.47
Fort Ripley‖	Mississippi		.30	.14																.12		T.				.10		T.	T.	T.	T.		0.66
Fosston	Red																		.25	.19					.04	.04		.01					0.53
Fram	...do					.02							.62						.15	.57								T.					1.36
Glencoe	Mississippi		.18	.28														T.	.50			.20			T.		T.	T.					1.06
Grand Meadow	...do			T.															.03	.53	.68	.19					T.	T.	T.				0.83
Hallock	Red			.05									1.10						.35	.25								T.					1.75
Halstad	...do												.24						.06	.65						.02	.09						1.06
Hinckley	St. Croix		.21															.13		.84		.08						T					1.26
International Falls	Rainy		T.										1.69					1.30	.18								.10	.20					3.47
Kelliher	Red					.07								.18					.39	1.05					T.	.03		.15	T.				1.87
Lake Crystal	Minnesota			.20															.17			.16											0.53
Leech Lake Dam	Mississippi		.02	.41										.02					.13	.83					.03	.A		.05					1.53
Little Fork	Rainy	.03											1.90							1.30								.10					3.33
Long Prairie	Mississippi		.18	.15															.22	T.	T.				T.	T.		T.					0.55
Lynd (2)	Minnesota		.13	.87																.20		.08					T.	T.					1.28
Mankato‖	...do			.20	.05															.33	T.	.16											0.74
Mapleplain	Mississippi																																
Milaca	...do		.21	.10																		T.			T.	.5		.04					0.40
Milan	Minnesota		.25																.53			T.			.01			T.					0.79
Minneapolis	Mississippi		.43	.02															.21	T.	.08	.10			T.		.01	.01	T.				0.86
Montevideo‖	Minnesota		.09	.25														T.		.28	.05					T.	T.					.10	0.77
Moorhead	Red												.01						.37	.01				.01	.11	.04		T.					0.55
Mora	St. Croix		.16	.01															.33			.08				.05	.02	.02					0.67
Morris	Minnesota		.14													.05			.40	.15					.02	T.		T.				.16	0.92
New London	Mississippi	.04	.56																.13									.04					0.77
New Richland	Minnesota		T.	.20															.45	T.	.04	.19			T.			T.					0.88
New Ulm‖	...do		.17	.27																T.	.11	.04	T.			T.	T.	T.	T.				0.59
Osakis	Mississippi		.16	.10															.04	.46		.01			.03	T.		T.				T.	0.80
Park Rapids‖	...do		.09	.30		T.								.01						1.43	.02					.03	.04		.01				1.93
Pine River Dam	...do		T.																.40							.15		.05	T.				0.60
Pokegama Falls	...do		.10	.10										T.					.13	.18					T.			T.					0.51
Red Lake	Red			T.										.06					.40	.37					T.								0.83
Red Wing‖	Mississippi			.06	.10															.28	.02	.18	.06			T.		T.	.02				0.72
Redwood Falls	Minnesota		.32	.52															.08	.02		.11											1.05
Reeds Landing‖	Mississippi																			.26		.08	.24						.01				0.59
Rochester‖	...do				T.															.26		.16							T.				0.42
Roseau	Red													.80					.11	.54								.07					1.52
St. Charles‖	Mississippi																			.18		.28							T.				0.46
St. Cloud	...do		.11	.16																.11		T.					.09	T.					0.47
St. Paul	...do		.40	.05															.07		.10	.08				T.	T.	.05	T.				0.75
St. Peter	Minnesota		.07	.17																		T.										T.	0.24
Sandy Lake Dam	Mississippi		.15																.15	.45							.08	.03					0.86
State Sanatorium	...do		.11																.09	1.10						.05							1.35
Stillwater‖	St. Croix		.40	.02	.01															.08		.12	T.			.01	T.	T.	T.				0.64
Taylors Falls	...do		.25	.11															.28		.12					.48	T.						1.24
Warroad	Rainy				.06								1.20						.20	.17					T.	T.	T.						1.63
West Concord	Mississippi			T.																.10	T.	.02			T.			T.	T.				0.12
Willow River	St. Croix																																
Windom	Des Moines		.06	.56																.05		.12											0.79
Winnebago‖	Minnesota			T.	T.															.20	T.	.10	T.						T.				0.30
Winnibigoshish	Mississippi			.08										.02					.18	.71					.06		.03						1.10

TABLE 2.—*Daily precipitation for October, 1910. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Minnesota—Cont'd.																																	
Winona	Mississippi			.06																.09	T.	.67	T.				.01	.04	T.				0.87
Worthington‖	Des Moines		.19	.66																		.13						T.				0.98
Zumbrota	Mississippi																																
South Dakota.																																	
Milbank	Minnesota			T.															T.	2.25	.35						T.	.02	T.				2.62
Wisconsin.																																	
Antigo	Wisconsin		.28	1.00	T																	.92	.18				.34	.30	T.				3.12
Barron	Chippewa		.43	.05																		.38					.63		.05				1.54
Beloit	Rock			.10	.40	.10																.33							T.				0.93
Big St. Germain Dam	Wisconsin		.67	.22										T.						.02		.38	.06			.06	.11	.21	T.	T.			1.73
Brodhead	Rock		.26	T.	.07															T.		.50											0.77
Burnett	...do		.08	.14	.16	T.							T.							T.	T.	.75	.02				T.	T.	T.				1.05
Darlington	...do			.20																		.50											0.70
Deerskin Dam	Wisconsin		.68	.30																T.	T.	.35	.15			.05	.11	T.	.11	.09			1.84
Delavan	Rock		T.	.36	.28	T.														T.	T.	.51					.05	.07	T.				1.27
Dodgeville	...do																																
Downing	Chippewa																			T.		.22				T	T.	T.					0.22
Eau Claire	...do		.62	.06					T.											.14		.32	T.			.68	.12	.01	.01				1.36
Grand Rapids‖	Wisconsin			.28	.39															.18	T.	.31	.36				.02	.05	T.				1.39
Grantsburg	St. Croix		.20	T.													.20			.15						T.	T.						1.55
Hancock	Wisconsin		.25	.15																		.70	.12					T.					1.22
Hatfield	Black		.08	.14																		.56	.04				.10	.04					0.90
Hayward	St. Croix		.37																	.01		.30					.02	.10					0.80
Hillsboro	Wisconsin		T.	.25		T.														T.	*	.35					.25	T.					0.85
Koepenick	...do		.33	.30															10			1.10					.60	.40					3.43
Lac du Flambeau	Chippewa		.50	.71																T.		.50			.10			.15					1.96
LaCrosse	Mississippi			.07															.01		.16	.26				T.	.02	.05	T.				0.57
Lake Mills	Rock		.03	T.	.2,	T.	T.													.91	T	.46	.02					.04					0.76
Lancaster	Mississippi			.78																	*	.57						.07					1.42
Long Lake	Wisconsin		.70	.36																.2	T.	.42	.05			.03	.16	.28	.15	T.			2.17
Madison	Rock		T.	.07	.06	.03														T.	.20	.22					.03	T.	.22				0.63
Mather‖	Wisconsin		T.		.18															.11		.48	.17			T.	T.	.11	.05				1.10
Mauston	...do		.02	.16																		.65											0.83
Meadow Valley	...do	T.	.13																	.10		.60	.05				T.	.15					1.03
Medford	Black		.85																			.70					.40		.15				2.13
Merrill	Wisconsin																																
Minocqua	...do		.50	.20												T.				.05		.06	.07			.04	.05	.10	T.				1.07
Mondovi	Mississippi		.09	.06																.14		.50				T.		.04					0.83
Mount Horeb	Rock			.10	.09	T.														T.	.10	.45						.02	T.				0.76
Muscoda‖	Wisconsin		T.	T.	.64															T.	T.	.52	.06					T.	T.				1.22
Neillsville	Black		.13	.41																		.59						.25					1.35
New Richmond	St. Croix		.67	.11															.21	.04						T.	T.	T.					1.03
Osceola	...do		.32	.09															.15	T.	.20					T.	T.	.20				T.	0.96
Park Falls	Chippewa		.43	.17																.04		T.	.34				.05	T.	.10	.10			1.23
Portage	Wisconsin			.45																		.50						.10					1.05
Prairie du Chien‖	Mississippi				.26															.01		.50	.04			.01		T.	T.				0.82
Prentice	Chippewa		.40	.25																.12		.19					.21	.15	T.				1.32
Rhinelander	Wisconsin		.74	.23																.02		.39	.08				.32	.17	.04				1.79
Sauk City	...do																																
Shullsburg	Mississippi			.28	.02																.12	.47						T.					0.89
Solon Springs	St. Croix		.35											T.					.30			T.			.40		.10						1.15
Spooner	...do		.20	.12																T.		.25				.15	T	.15					0.87
Stanley	Chippewa		.49	.28																T.	T.	.53	T.			T.	.31	.02	T.			T.	1.60
Stevens Point	Wisconsin		.30	.40	T.																	.90											1.60
Sugar Camp Dam	...do		.61	.14																		.35				.13	.11	.35	.07	.07			1.83
Twin Lakes Dam	...do		.66	.06												.40				.02	T.	.05	.10			T.	.15	.30	.15				1.89
Valley Junction	...do		T.	.11														.08				1.31						.21					1.71
Viroqua	Mississippi			.18																.10	.04	.50	.32				T.	.13					0.97
Vudesare	Wisconsin		1.16	.19	T.											T.				T.	T.	.48	T.				T.	.36	.12				2.31
Watertown‖	Rock			.08	T.	.12	T														.12	.35	.24				T.	.09	T.	T.			1.00
Waukesha	Fox			*	.41															.12	.60							T.					1.13
Wausau	Wisconsin		.55	.38																.12		.77	.22				.36	.07	T.				2.47
Weyerhaeuser	Chippewa		.45	.13																.10	T.	.30	T.				.24	.04					1.26
Whitehall	Mississippi			.20																		.30					T.						0.50
Iowa.																																	
Albia‖	Des Moines				.09		T.															.21	T.						T.	T.			0.30
Algona	...do			.11															.75	.10	.09	.13											1.18
Alta‖	Raccoon			.50																.18	T.	.18							.02				0.88
Amana	Iowa			.24		.01															.23	.27						T.	T.				0.75
Ames	Skunk																																
Baxter	...do			.11	.03															.16	.12	.04						T.					0.46
Belle Plaine	Iowa			.08	T.	T.														.01	.16	.09											0.34
Belmond	...do			.21															.77	.03	.12	.06					T.	T.					1.25
Bloomfield	Mississippi																																
Bonaparte	Des Moines			.29																	.22	.14						T.	T.				0.65
Boone‖	...do			.14	.22															.37		.15						T.	T.				0.88
Britt	Iowa			.16															.52	.48	.13												1.29
Buckingham	Cedar			.14															.06		.20												0.40
Burlington‖	Mississippi				.39		.12														.05	.35	.10						T.	T.			1.01
Carroll‖	Raccoon	.24																	.33		.08												0.65
Cedar Rapids‖	Cedar		T.	.23	T.	T.																.56	T.						T.	T.			0.79
Charles City	...do		.14																.06		.12	.04											0.36
Clear Lake	...do		T.																T.	T.	.20												0.20
Clinton	Mississippi		.07	.01	.03															T.	.50	.10						.02					0.73
Columbus Junction	Iowa		.21	.05	T.	T.														T.	.32	.18						T.	T.				0.76
Davenport	Mississippi		.06	.01	.03															.01	.37	.12					.01	T.	T.				0.61
Decorah	...do		.20															T.				.65											0.85
Delaware	...do		.59	.01																	.10	.45											1.15
Des Moines	Des Moines		.42		T.														.21	T.	.04	.01						T.	T.				0.68
De Soto	Raccoon		.48		T.														.36		.03	.02						T.					0.89
Dubuque	Mississippi		.20	T.	.02															T.	.56	.10						.01	T.				0.89
Earlham	Raccoon		.52																.42	.02	.04	T.				T.		T.					1.00
Elkader	Mississippi		.25																		.62	T.			T.			T.					0.87
Elma	Wapsipinicon		.16																T.	.05	.06	.15				T.	T.	T.					0.42
Estherville‖	Des Moines		.42	.05															.03			.15						T.	T.				0.67
Fairfield	Skunk		.21	.22	.02															.01	.17							T.					0.63
Fayette	Mississippi		.06																		.48	.33				T.		T.					0.87
Forest City‖	Cedar		T.	.15																.93		.20	T.				T.						1.28
Fort Dodge‖	Des Moines		.12	.11															1.32	.03	.15						T.						1.73
Fort Madison	Mississippi		.31	.05	T.															T.		.51											0.87
Gilman	Iowa		.13																	.05	.21												0.39
Grand Meadow	Mississippi		.05		T.															.17	.20							.02	.01				0.96
Greene	Cedar		.20	T																.12	.11	.13						T.	T.				0.56
Grinnell	Iowa		.17		T.														T.		.18	.07						T.					0.42

TABLE 2.—*Daily precipitation for October, 1910. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Iowa—Cont'd.																															
Grundy Center	Cedar																					.41						T.					0.41
Guthrie Center	Raccoon			.44															.80		.06	.05						T.	T.				1.35
Hampton	Cedar			.28															.25		.25												0.78
Humboldt	Des Moines			.23															.78	.14	.08	.15					T.	T.					1.38
Independence	Wapsipinicon			.15																	.25	.25											0.65
Indianola	Des Moines			.23															*	.14	.05	T.						T.	T.				0.42
Iowa City‖	Iowa				.13	.02	T.															.42	T.										0.57
Iowa Falls‖	do			T.	.25		T.													.16		.20	T.					T.	T.				0.61
Jefferson	Raccoon			.22															1.25	.02		.04											1.53
Keokuk	Mississippi		T.	.40	T.	.05														.04	.20	.12							T.				0.81
Keosauqua‖	Des Moines				.20		.09														T.	.26	.04						T.	T.				0.59
Knoxville	do			.20		T.														T.	.08							T.					0.28
Lacona	do			.56																	.40	T.							.01				0.97
Le Claire‖	Mississippi				.19	T.	.03														.02	.48	.12					.04	T.	T.				0.88
Marshalltown‖	Iowa			.02	.11	T.														.12		.12							T.	T.				0.37
Mason City	Cedar			.12															.50	.16	.19												0.97
Mount Pleasant	Skunk			.18	.01		.06													T.	.37	.19						T.	T.				0.81
Muscatine‖	Mississippi			T.	.15		.02														.02	.35	.12							T.				0.66
New Hampton	Wapsipinicon		.10	.02																T.	.23	.19						T.					0.54
Newton	Skunk			.23																.07	.14												0.44
Northwood	Cedar			.03															*	.55	.28							T.	T.				0.86
Olin	Wapsipinicon			.32	T.	.04														T.	.44	.18							T.				0.98
Osage	Cedar			.19																.25		.21						T.					0.65
Oskaloosa	Des Moines			.07		T.															.08	.16						T.					0.31
Ottumwa	do			.05		T.															.14	T.						T.					0.19
Pella	do			.05		T.														T.	.20	.04						T.	T.				0.29
Perry	Raccoon			.40															.30		.02							T.					0.72
Plover	Des Moines			.22															.50		T.	.20											0.92
Pocahontas	do		.22																.38	.18	.07												0.85
Ridgeway	Mississippi			.09	.04														.04	.01	.32	.10	T.		T.		.01	.03	T.				0.64
Rockwell City	Raccoon			.38															.43		.40							T.					1.21
Sac City	do			.19																	.44	.06					T.						0.69
St. Charles	Des Moines			.52	.01														.08	.05	.11	T.							T.				0.77
Sigourney	Skunk			.05		T.															.14	.10						T.	T.				0.29
Stockport	do			.28	T.	T.	.04													T.	.20	.13						T.	T.				0.65
Storm Lake	Raccoon			.41																	.02	T.						.01					0.44
Stuart	do			.52															.45		.10							T.					1.07
Tipton	Cedar			.18		.09															.20	.33											0.80
Toledo	Iowa			.17		T.															T.	.22							T.				0.39
Wapello	do			.18			.06													T.	.29	.25						T.	T.				0.78
Washington	Skunk				.20																*	.34											0.54
Waterloo‖	Cedar			.02		T.														.10		.25	T.						T.	T.				0.37
Waukee	Raccoon			.37		.03													.38	.03	.06	.02						T.	T.				0.89
Waverly	Cedar				.07																.20	.11											0.38
Webster City	Des Moines			.23															.64	T.	T.	.10					T.	T.	T.				0.97
West Bend	do			.20															.32	.11	.15	.10						T.					0.88
Whitten	Iowa			.23															T.	.15	.05	T.						T.	T.				0.43
Winterset	Des Moines			.71															.26	.03	.04	T.						T.	T.				1.04
Missouri.																															
Gorin	Mississippi			.32	T.																.18	.10						T.					0.60
Hannibal	do			.59	.03	.07														T.	.22	.23					T.		T.				1.14
Lousiana	do			.40	.10		.20														.14	.14						.10	T.				1.08
Mexico‖	do				.38		.23														.10	.46	.05					T.		T.			1.22
Steffenville	do			1.00	.10															T.	.35	.20							T.				1.65
Sublett	do					T.																							T.				T.
Warrenton‖	do				.84	1.45	1.16														.05	.09						.04					3.63
Indiana.																															
Collegeville	Iroquois				1.50	.05	.25															.55							T.				2.35
Knox	Kankakee			.12	1.46		.11														T.	.59	.03			T.		.11	.14	.22			2.78
Laporte	do			.16	1.19		.12														.02	.75						.08	.21	.01			2.54
Plymouth	do			T.	1.31	.02	.11														T.	.53	.04					.09	.29	.73			3.12
Illinois.																															
Aledo	Mississippi			.17	.04														.05	.28	.33							T.					0.87
Alexander	Illinois			.16	.22	.02	1.06														T.	.20						.05	.01				1.72
Antioch	do			1.50	.25																	.62						T.					2.37
Astoria	do			1.25	.30		.25														.10	.02						T.	T.				1.92
Aurora	do		T.	.52	.12		.24									T.					T.	.32						T.					1.20
Bement	Mississippi				.56	.58	.25																.38					.02	T.				1.79
Benton	do																																
Bloomington	Illinois			.39	.45	.11															T.	.28							T.				1.23
Cairo	Mississippi			1.29	4.47	4.77	.42							.04	.40						T.	.17					T.	.01					11.57
Carbondale	do				4.42	4.25	1.07								.10							.42						.01					10.27
Carlinville	Illinois				.75	1.05	.46															.28						.05	.03				2.57
Carlyle	Mississippi				1.40	2.10	.60															.48						.07	T.				4.70
Chester‖	do			.28	2.96	.98	1.13							T.	.01							.36							T.				5.72
Clinton	Illinois			.01	1.33	.13	.37														.06	.34						.05	T.				2.29
Coatsburg	Mississippi			.05	.20	.15															.30	.32											1.02
Cobden	do			T.	5.10	4.60	1.10							T.	.15							.48												11.43
Dakota	do		.24	.03	.02	T.	.01													T.	.02	.22	T.					.05	T.				0.59
Decatur‖	Illinois			.05	.98	.44	.33															.38						.02	T.				2.20
Dixon‖	Mississippi				.14	.03	.03															.28	.06						T.					0.54
Du Quoin	do																																
Dwight	Illinois			.10	.63	.03	.25														T.	.31					T.	T.	.12				1.44
East St. Louis‖	Mississippi				.62	.03	2.33														.04	.19	.02					.01					3.24
Edwardsville	do			.20	.42	3.05	.50														T.	.25											4.42
Elgin	Illinois			.58	.12	.16																.34						.01					1.21
Galva‖	do				.70	.03	T.															.33	.09					.02	T.				1.17
Grafton‖	Mississippi				.76	.86	1.94															.63	.04					.06					4.29
Greenville	do			.62	.70	3.02	.32															.39						T.	T.				5.05
Griggsville	Illinois			1.01	.20		.29													.15									T.				1.65
Halfway	Mississippi																																
Havana	Illinois			.50	.25		.44														.05	.27											1.51
Henry	do			.85	.10		.25														T.	.28							T.				1.48
Hillsboro‖	Mississippi				.55	1.15	.45															.35	2.50					T.	T.				5.00
Joliet	Illinois			.99	.17	T.														T.	T.	.52						T.	T.				1.68
Kishwaukee	Mississippi		.07	.11	.20	.02	.07													.02	T.	.33						T.	.02				0.84
La Grange	Illinois			T.	.81		.22														.06	.35						T.					1.44
La Harpe	do			.21	.04															T.	.14	.36							T.				0.75
Lanark	Mississippi		T.	.13	.02	T.														.02	.10	.34						.05	T.				0.66
La Salle	Illinois			.51	.05	T.	.18													T.	.11	.15					T.	.02	.10				1.03
Lincoln	do			.10	.70	.06	.25														T.	.29						T.	T.				1.40
Loami	do			.20	.37	.25	.75														T.	.37						T.	T.				1.94
Martinton‖	do			1.15		1.05															.37	.27					.03	T.					2.87
Mascoutah	Mississippi			.81		2.87	.45															.35						.06	T.					4.54

TABLE 2.—*Daily precipitation for October, 1910. District No. 5*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Illinois—Cont'd.																																	
Minonk	Illinois			.55	.12	T.															T.	.26						T.	T.				0.93
Monmouth	Mississippi			.29	.05		.04													.07	.30	.11											0.86
Morrison	do			.07	.10		.05													.03	.03	.32						.04	T.				0.64
Morrisonville	Illinois				1.14	.64	.32															.29	T.					.05	T.				2.44
Mt. Vernon‖	Mississippi				4.18	.45	1.04	.02														.19	.15					.02					6.65
Oregon	do			.05	.27															T.		.40						T.	T.				0.72
Ottawa	Illinois			.59	.09															.52								.05	T.				1.25
Pana	Mississippi				.57	.78	.37															.35						.04	T.				2.11
Peoria	Illinois			.94	.02	.08	.17														.28	.20							T.				1.69
Pontiac	do				.69	.36	.39														T.	.25	T.						T.				1.69
Riley	Mississippi		.07	.62	.21		.07														.01	.51						.02					1.51
Rockford‖	do		.17		.26	.07	.14														.03	.24	.06					.04	.0	T.			1.03
Rushville	Illinois			.92		.14															T.	.13						T.	T.				1.19
St. Charles	do		T.	.45	.20	T.	.15														T.	.37						.02	T.				1.19
St. Peter	Mississippi			T.	1.55	1.75	.35															.38						.08	T.				4.11
Sparta	do			.76	2.18	1.15	.51						.01		.01																		4.62
Springfield	Illinois			.85	.02	.44	.15														.10	.13					.05		T.				1.74
Streator‖	do				.75		.38															.10	.20							T.			1.43
Sullivan	Mississippi			T.	.67	.68	.27															.40						.07	T.				2.09
Sycamore‖	do				1.53	.10	.05									T.					T.	.22	.14					T.		T.			2.04
Tiskilwa	Illinois																																
Walnut	Mississippi			.43	.10															T.	.08	.25						.22	.03				0.91
Warsaw‖	do			.55		.05														.05		.30							T.				0.95
White Hall	Illinois			.37	.12	.39	.41														.45	.13						.02	T.				1.89
Windsor	Mississippi			T.	1.05	.85	.35															.30						.05	.01				2.61
Winnebago	do		.06	.05	.19															.03	T.	.45						T.	T.				0.78
Yorkville	Illinois		T.	.60	.12	.05	.25														T.	.30						T.	T.				1.32
Zion	Mississippi		T.	.28																	.10	.30						.10	T.				0.78

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 5, Upper Mississippi Valley.*

Date.	North Dakota.												Minnesota.											
	Bottineau.‡‡		Devils Lake.		Lisbon.‡‡		Minot.‡‡		Pembina.‡‡		Collegeville.		Crookston.‡‡		Grand Meadow.		Montevideo.‡‡		Moorhead.		New Ulm.‡‡		Pine River Dam.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	74	39	72	40	.....	.....	72	34	.....	.....	72	45	70	34	72	43	74	40	73	36	73	46	74	46
2	72	38	74	46	.....	.....	75	35	.....	.....	77	49	76	50	76	50	76	46	76	39	76	44	76	46
3	68	30	69	33	.....	.....	77	43	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
4	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
5	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
6	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
7	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
8	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
9	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
10	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
11	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
12	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
13	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
14	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
15	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
16	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
17	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
18	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
19	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
20	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
21	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
22	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
23	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
24	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
25	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
26	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
27	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
28	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
29	69	35	63	36	.....	.....	69	37	.....	.....	69	43	65	41	69	41	69	35	69	36	69	37	69	36
30	68	30	68	36	.....	.....	69	35	.....	.....	68	39	66	29	68	50	67	29	67	30	68	34	67	30
31	75	31	69	33	.....	.....	74	35	.....	.....	72	48	72	30	72	47	72	30	72	33	72	35	72	33
Mns	59.8	28.3	59.5	35.6	.....	.....	63.0	32.9	.....	.....	64.5	42.8	58.6	37.8	68.6	38.9	67.2	40.9	63.6	37.2	68.1	39.8	63.3	37.7

Date.	Minnesota.												Iowa.											
	St. Paul.		Winnibigoshish.		Delavan.		Eau Claire.		La Crosse.		Madison.		Mauston.		Spooner.		Wausaw.		Algona.		Cedar Rapids.‡‡		Charles City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	72	49	72	43	72	43	75	48	70	46	95	55	72	46	69	43	77	50	74	43	72	45	72	44
2	76	50	76	41	71	40	71	42	69	46	71	48	69	46	64	47	72	51	65	41	71	44	71	44
3	77	44	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
4	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
5	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
6	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
7	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
8	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
9	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
10	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
11	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
12	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
13	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
14	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
15	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
16	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
17	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
18	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
19	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
20	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
21	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
22	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
23	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
24	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
25	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
26	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
27	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
28	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
29	69	44	69	41	69	43	69	43	69	46	69	46	69	46	69	46	69	46	69	41	69	44	69	44
30	77	49	73	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
31	77	47	76	41	72	43	74	43	69	46	73	46	72	46	66	45	72	52	67	41	72	44	72	44
Mns	66.0	41.3	65.2	40.5	64.4	42.0	62.6	44.7	63.0	41.5	60.9	38.2	63.8	40.8	66.6	39.9	66.2	43.1	65.4	43.5	67.9	46.3	68.1	44.6

Date.	Iowa.																							
	Davenport.		Des Moines.		Dubuque.		Keokuk.																	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.																
1	72	46	74	46	70	46	74	46																
2	69	46	68	46	72	46	74	46																
3	72	46	74	46	72	46	74	46																
4	72	46	74	46	72	46	74	46																
5	69	46	69	46	69	46	69	46																
6	72	46	74	46	72	46	74	46																
7	72	46	74	46	72	46	74	46																
8	69	46	69	46	69	46	69	46																
9	72	46	74	46	72	46	74	46																
10	72	46	74	46	72	46	74	46																
11	69	46	69	46	69	46	69	46																
12	72	46	74	46	72	46	74	46																
13	72	46	74	46	72	46	74	46																
14	69	46	69	46	69	46	69	46																
15	72	46	74	46	72	46	74	46																
16	72	46	74	46	72	46	74	46																
17	69	46	69	46	69	46	69	46																
18	72	46	74	46	72	46	74	46																
19	72	46	74	46	72	46	74	46																
20	69	46	69	46	69	46	69	46																
21	72	46	74	46	72	46	74	46																
22	72	46	74	46	72	46	74	46																
23	69	46	69	46	69	46	69	46																
24	72	46	74	46	72	46	74	46																
25	72	46	74	46	72	46	74	46																
26	69	46	69	46	69	46	69	46																
27	72	46	74	46	72	46	74	46																
28	72	46	74	46	72	46	74	46																
29	69	46	69	46	69	46	69	46																
30	72	46	74	46	72	46	74	46																
31	72	46	74	46	72	46	74	46																
Mns	70.7	47.6	71.8	47.6	70.4	47.6	72.0	47.6																

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 5*—Continued.

Date.	Hannibal, Mo.		Laporte, Ind.		Illinois.															
					Cairo.		Greenville.		La Salle.		Monmouth.		Mt. Vernon.		Peoria.		Springfield.		Winnebago.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	77	63	70	58	91	64	84	61	74	51	77	54	90	58	76	51	78	58	73	51
2	86	59	72	41	89	66	84	64	78	51	87	50	88	57	82	55	82	56	76	42
3	76	64	82	45	84	69	82	64	83	65	77	62	88	63	83	63	81	63	80	63
4	79	63	74	62	72	63	75	62	75	64	78	62	77	62	77	62	76	63	73	59
5	73	53	70	50	73	64	70	65	72	55	70	61	74	62	73	54	71	55	69	58
6	63	43	68	50	65	54	66	50	61	43	65	42	61	52	62	39	62	48	62	44
7	67	38	61	34	64	48	65	42	66	37	70	38	64	41	67	36	64	43	69	36
8	73	39	67	34	70	49	70	42	71	42	76	39	69	42	71	38	70	42	72	40
9	70	46	61	45	75	53	73	48	63	45	68	43	73	43	66	46	68	49	63	39
10	69	46	64	35	70	51	70	45	68	39	74	39	72	46	70	38	68	43	71	34
11	77	45	73	40	73	52	74	49	75	44	80	45	77	44	76	43	74	48	78	42
12	78	47	70	45	78	54	78	52	71	49	84	48	80	44	77	46	77	51	64	51
13	81	50	72	42	70	57	78	53	76	54	81	48	80	47	78	50	77	51	74	46
14	84	56	78	49	73	63	74	59	83	55	87	57	78	52	84	54	81	58	80	48
15	84	57	70	53	80	62	80	60	78	52	85	52	87	55	81	52	81	60	78	42
16	84	60	80	55	83	60	82	59	86	58	88	59	83	54	85	56	82	61	86	58
17	82	57	81	53	84	60	80	60	84	60	86	56	87	54	84	59	81	60	85	55
18	84	54	79	51	83	60	82	60	84	58	85	52	87	55	84	56	81	57	83	53
19	70	45	81	54	84	58	81	54	78	48	72	48	87	54	77	48	80	49	78	52
20	46	42	64	51	58	50	56	47	51	46	49	42	65	48	50	45	50	46	52	42
21	44	37	56	45	50	43	47	44	50	43	46	41	53	45	46	42	46	43	48	41
22	61	33	53	40	63	41	58	36	56	37	53	31	63	34	58	34	58	35	53	33
23	72	35	60	37	68	43	66	40	65	34	77	32	70	34	67	31	67	39	64	30
24	70	48	65	39	74	47	68	40	65	50	69	47	76	41	68	46	68	48	63	44
25	64	44	56	43	69	52	65	44	59	43	82	38	70	42	60	39	61	43	58	40
26	53	43	66	39	80	49	78	42	76	42	86	38	77	42	79	41	80	42	73	40
27	49	36	62	37	64	40	65	40	45	34	60	35	66	44	47	32	53	34	53	33
28	39	28	40	31	42	33	42	31	39	28	33	20	40	31	41	27	40	30	39	27
29	46	22	38	31	47	28	46	28	42	22	45	21	50	26	43	21	42	29	41	18
30	69	40	58	28	59	36	61	33	53	32	66	32	63	26	64	33	65	34	61	30
31	68	44	60	30	65	40	65	37	65	34	69	37	76	38	67	33	66	41	64	30
Means	69.9	46.4	66.2	43.5	71.0	51.9	69.8	48.7	67.8	45.7	72.0	44.5	73.3	46.3	69.1	44.2	68.7	47.7	67.2	42.6

Climatological Data for October, 1910.

DISTRICT No. 6, MISSOURI VALLEY.

MONTROSE W. HAYES, District Editor.

GENERAL SUMMARY.

Over most of the Missouri River drainage area mild and sunshiny weather prevailed for a greater length of time than is usual in October, although the month generally is marked by the prevalence of Indian Summer conditions. The low and high atmospheric pressure areas that caused the few rainy periods and the warmest and coldest days of the month were normal, except that they probably had less energy than is frequently displayed by some of the October high pressure areas and storm centers. Work on the government irrigation projects in Montana, the Dakotas, Wyoming, and Nebraska advanced steadily, as the weather conditions through almost all the month were quite favorable; there was not sufficient precipitation to cause any delay, and the temperatures were not low enough to interfere with the masonry and concrete work. The deficiency in rainfall since the first of the summer, that has been rather general over a large part of the district—practically all of it except the extreme lower part—rendered the ground too dry in large areas, especially in the Dakotas and Iowa, for satisfactory fall plowing. The supply of surface water in the grazing country was not large at the close of the month, yet the water holes contained sufficient for the present needs of stock. In the Dakotas the stock shipments were reported by railroad officials to have been heavier than they have been for several seasons, on account of the short supply of feed. No extensive fires were reported from the prairie country, but the supervisor of the southern section of the Black Hills Forest Reserve stated that many serious forest fires, perhaps more than during any other period of equal length since the creation of the Reserve, occurred prior to the 17th, when they were extinguished by rain.

TEMPERATURE.

At a few points in southwestern Montana the mean temperature for the month was just about normal. In all the remainder of the district it was higher than it usually is in October. The average daily excess was greatest in Kansas, Nebraska, the Dakotas, and northwestern Montana, where it ranged from 3° to 6°. In Iowa, Missouri, and Kansas the warmest weather was on the 1st and 2d, when there was an area of high barometric pressure over the country to the east of the Mississippi River, and an atmospheric depression along the eastern slope of the Rocky Mountains—a pressure distribution or arrangement that gave moist southerly winds over the lower Missouri Valley. On these days thermometer readings of 90° and higher were made at numerous stations. In all the remainder of the district the warmest weather occurred on the 9th and 10th. It was coincident with the prevalence of low atmospheric pressure over the upper Missouri Valley. This low pressure, contrary to the usual rule, was accompanied by almost cloudless weather. The coldest weather of the month was produced by a pronounced area of high pressure that moved between the 26th and the 29th from Montana in a south-southeasterly direction to the west Gulf coast. The temperature readings, from a comparative standpoint, were only moderately low, but at some places in Montana, Wyoming, and Colorado the lowest readings were below zero. These low temperatures, however, were due to some peculiar topographical features that made the occurrence of cold weather possible in isolated areas of small extent, while much milder temperatures prevailed in the surrounding country. There were two other waves of cool weather earlier in the month, but they were of minor importance.

PRECIPITATION.

There was an excess in precipitation in the Black Hills and on the eastern side of the main range of the Rockies from the extreme northern part of Colorado to the Sun River Basin, in northwestern Montana. This excess was small, except at a few points over the headwaters of the North Platte River, in Wyoming. Over the basins of the Osage and Gasconade rivers in Missouri, and in the Missouri Valley below the mouth of the Gasconade, there was also an excess. In the remainder of the district the precipitation was less than in the average October. The greatest deficiency was in Kansas, Nebraska, eastern South Dakota, and extreme western Iowa. A precipitation area crossed the entire drainage area between the 1st and 6th. It affected Montana from the 1st to the 4th; Wyoming, Colorado, the Dakotas, Kansas, and Nebraska from the 2d to the 5th; and Iowa and Missouri from the 3d to the 6th. In Colorado the rains were the lightest, and in Missouri they were the heaviest, being especially heavy around the mouth of the Missouri River. A second general storm that prevailed from the 16th to the 21st gave rain over all the country between the Continental Divide and the Mississippi River. The greatest amounts were over the headwaters of the South Platte River; the fall over the other watersheds was very moderate. During the third well-marked rainy period, from the 25th to the 27th, the precipitation was light; although it was general it amounted to no more than mere sprinkles in a large part of the district. On the 31st there was light rain at many stations in Montana and Wyoming, but very little elsewhere. Snow occurred as far east as the mouth of the Missouri River. In Kansas and Missouri it was in the form of flurries that melted upon striking the ground. In Iowa and Nebraska it amounted to as much as 1.0 inch in some places; in the Dakotas it was still heavier, but there were no amounts that were in any way unusual for the season. In the Black Hills and in the higher mountain country of Montana, Wyoming, and Colorado there were some fairly heavy falls, the greatest of record for the entire month being 20.0 inches at the Elk Mountain station in Wyoming. The heaviest precipitation for the month was 4.73 inches at St. Charles, Mo. The greatest fall in 24 hours, 3.61 inches, was at St. Charles also.

RIVERS.

All streams were abnormally low, but the stages were not unprecedented. At Hermann, Mo., on the Missouri River 103 miles above its mouth, the lowest stage was 3.7 feet on the 24th and 25th. The record of gage readings at Hermann extends back to and includes 1873 (with the exception of 1883 and 1888). During these 36 years the river has been lower in four Octobers than it was in October, 1910. The lowest October reading of record is 1.2 foot in 1897. At Hannibal, Mo., on the Mississippi, 113 miles above its confluence with the Missouri, the minimum stage was 0.8 foot. This was 0.9 foot above the extreme low water for October, which occurred in 1891. The Hannibal records cover 1870, 1872, 1873, and 1878 to 1910, inclusive. They show that in five Octobers the water was lower than it was in 1910. At St. Louis the minimum stage for the month just passed was 2.6 feet; it prevailed from the 24th to the end of the month. Twice since 1861 the water at St. Louis has been lower in October than 2.6. Both in 1864 and 1894 there was a stage of 2.4 feet. Low water at St. Louis, of course, is dependent upon low stages occurring simultaneously in the Missouri and in the Mississippi above Alton, Ill. The lowest recorded stage in these streams occurred in different years, and at St. Louis the water in each case was kept up to a fair level by the branch that was not unprecedentedly low. The four October readings made at St. Louis that stand out with marked prominence on account of being very low (2.4 in 1864 and 1894, and 2.6 in 1895 and 1910) occurred during the coincident prevalence of low, but not unprecedented, stages in both branches of the stream above St. Louis.

TABLE 1.—*Climatological data for October, 1910. District No. 6, Missouri Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Barnum	Johnson	5,300	5								1.50		0.55	8.0	4	24	2	5	w.	Thomas Freegaurd.
Basin	Big Horn	3,862	11																	O. J. Robertson.
Bennett	Carbon		2								3.72		2.00	0.0	3	24	4	3	w.	Chas. C. Young.
Big Creek Station	do																			U. S. Forest Service.
Burns	Laramie		1																	Henry D. Colburn.
Cheyenne	do	6,088	39	49.6	+ 4.3	85	9	16	28	46	1.04	+ 0.32	1.00	0.4	5	14	14	3	nw.	U. S. Weather Bureau.
Chugwater	do	5,282	9	48.6	+ 2.8	88	10	9	27	56	2.20	+ 1.30	1.50	T.	3	20	6	5	w.	George Milne.
Clark	Big Horn	4,320	4	54.0		84	10	19	27†	35	0.23		0.11	T.	3	22	4	5	n.	Chas. A. C. Snow.
Cody	do	5,000	3	53.6		89	9	14	27	41[b]	0.20		0.20	T.	1	21[b]	7[b]	1[b]	w.	F. A. Fish.
Crystal Lake	Laramie	6,900	1																	Cheyenne City Engineer.
Dome Lake	Sheridan	8,821	2																	Chas. Hidlay.
Douglas	Converse	4,793	1	47.0		84	10	11	19	53	1.20		0.44	T.	6					Henry C. Miller.
Dubois	Fremont	6,909	3	44.9		82	10	10	27	57	0.37		0.23	T.	4	19	11	1	w.	Dr. F. H. Welty.
Eaton's Ranch	Sheridan	4,600	5	52.5		89	10	3	25	62	1.76		1.33	3.0	4	23	3	5	n.	F. A. Eaton.
Echeta	Crook	4,200	1								1.40		0.35		5	23	4	4	n.	M. R. Hunter.
Elk Mountain	Carbon		5								1.61		1.01	20 0	5					Wm. Richardson.
Encampment	do	7,322	1	44.4[f]		80	10	9	20	45[f]	1.29		1.03	T.	3	11[b]	6[b]	3[b]	w.	U. S. Forest Service.
Ervay	Natrona		1	47.8		81	10	0	20	42	2.36		1.10	13.0	5	19	7	5	sw.	Frank Jameson.
Fort Laramie	Laramie	4,270	32	50.7	+ 4.0	90	10†	14	28	59	0.59	− 0.10	0.36	0.0	2	20	11	0	w.	John Hunton.
Fox Creek Station	Albany	9,015		36.6		71	10†	−12	20	60	0.79		0.48	12.0	4	18	12	1	w.	U. S. Forest Service.
Gillette	Crook	4,546	4	53.6		88	10	18	28	44	0.77		0.42	T.	3	20	7	4		S. D. Perry.
Hunters' Station	Johnson	8,000	4	42.3		76	9	4	27	47	1.27		0.44	8.0	6	23	5	3	w.	U. S. Forest Service.
Hyattville	Big Horn	4,632	11	52.6	+ 4.7	94	9	10	27	47						19	6	6	w.	Wm. Booth.
Jireh	Converse	5,050									1.83		1.00	3.0	4	19	8	4	w.	P. L. Ford.
Kirtley	do		6	49.5	+ 4.1	89	10	10	28	45	0.76	− 0.3	0.31	0.0	3	23	7	1	nw.	D. M. Zum Brunnen.
Kirwin	Big Horn	9,187	2								2.60		0.80	26.0	4				nw.	C. L. Tewksbury.
Knowles	Crook		1								2.47		1.30	2.8	7					G. A. Knowles.
Lander	Fremont	5,372	18	47.4	+ 5.3	80	10	16	28	46	0.37	− 0.68	0.19	2.0	3	13	14	4	ne.	U. S. Weather Bureau.
Laramie	Albany	7,188	19	45.0	+ 3.0	82	10†	11	20	53	1.79	+ 0.98	1.30	0.4	6	24	4	3	sw.	University of Wyoming.
Leo	do	6,878	9	44.7	+ 2.4	82	10	10	20†	46	2.03	+ 1.22	1.32	0.0	3	21	6	4	w.	C. A. Cowdin.
Lolobama Ranch	Big Horn	7,052	6	42.0	+ 1.5	77	4	8	27	51	0.15	− 0.45	0.10	0.0	2	11	15	5	w.	Mary E. Painter.
Lovell	do	3,825	5	47.6	+ 2.1	82	9	13	28	48	0.54		0.25	0.0	4	18	9	4	s.	R. Fred Harrison.
Lusk	Converse	5,007	20																	D. E. Goddard.
Manville	do	5,050	1								2.09		1.00	4.0	6	23	4	4	w.	C. A. Sherman.
Moorcroft	Crook	4,111	7																	James K. Somers.
Moore	Albany	6,000	9	55.4	+ 8.3	89	10				1.05	+ 0.14	0.93	0.0	6	10	12	3	w.	Edwin Moore.
Newcastle	Weston	4,319	3	49.0		90	12	14	20	44	0.20		0.12	T.	2	22	9	0	nw.	Dr. S. W. Johnson.
Pathfinder	Natrona	5,735	4	49.4	+ 2.3	83	10†	14	27	50	2.87	+ 1.92	1.89	T.	6	23	3	5	sw.	U. S. Reclamation Service.
Phillips	Laramie	4,900	7	53.4	+ 5.9	89	8†	29	3	46	1.60	+ 0.57	1.50	T.	2	22	3	6	nw.	Mrs. Arthur Rugg.
Powell	Big Horn	4,376	3	50.4		87	10	14	28	48	0.30		0.19		2	21	7	3	nw.	U. S. Reclamation Service.
Rawlins	Carbon	6,748	8	46.4	+ 2.0	80	10	16	20	46	1.12	+ 0.33	0.94	3.4	4	20	6	5	w.	E. J. Ehrenfeld.
Riverton	Fremont	4,960	2																	J. F. Nelson, jr.
Saratoga	Carbon	6,785	12	45.3	+ 1.7	85	10	12	20	58				T.	3	22	4	2		Saratoga & Enc'pm'nt Ry.
Sheridan	Sheridan	3,790	15	48.3	+ 3.2	87	10	16	28	51	1.64	+ 0.80	0.52	0.7	7	13	2	16	nw.	U. S. Weather Bureau.
Shoshone Dam	Big Horn	5,385	4																	U. S. Reclamation Service.
Soldiers' Home	Johnson	4,635	18	51.6	+ 4.5	85	10	16	28	44	1.40	+ 0.91	0.40	6.0	5	12	18	1	nw.	Geo. L. Courtney.
South Pass City	Fremont	7,873	8	40.0		74	10	− 3	20	50	0.28		0.07	0.7	6	16	11	4	sw.	John Sherlock.
Thermopolis	do	4,350	6	50.4	+ 2.7	87	10	16	28	52	1.10		0.69	0.3	5	20	7	4	sw.	A. L. Duhig.
Upton	Weston		1								2.04		0.75	0.7	8	16	9	6	ne.	C. E. McPherren.
Valley	Big Horn	6,500	1								0.85		0.54	0.0	4	22	4	5	w.	Jas. L. McLaughlin.
Verona	Sheridan		1								2.07		0.55	T.	6	11	15	5	se.	O. A. Roode.
Wiant's Ranch	Carbon	7,400									2.50		1.70	10.8	5	17	4	10	sw.	Ira G. Wiant.
Wiley	Big Horn	5,375	1																	C. D. Marshall.
Wyncote	Laramie	4,207	3	51.0		87	10	14	28	56	0.53		0.46	0.0	2	25	4	2	nw.	U. S. Reclamation Service.
Yellowstone Park	Yellowstone Park	6,200	22	43.6	+ 2.1	75	10	12	27	35	1.49	+ 0.35	0.43	1.0	11	13	11	7	sw.	U. S. Weather Bureau.
(1) Fountain Hotel	do	7,220	4	40.2		82	6	6	27	55	1.88		0.95	9.5	5	21	1	9	s.	U. S. Army.
(2) Grand Canyon	do	7,900	3	36.4		71	10†	2	27	48	2.03		0.80	6.0	7	16	9	6	w.	Do.
(3) Lake Hotel	do	7,733	6	37.0		68	10	4	21	43	1.63		0.74	9.5	5	23	3	5	s.	Do.
(4) Norris	do	7,525	6	37.6		74	9	3	27	53	1.18		0.78		4	21	2	8	w.	Do.
(5) Riverside	do	6,500	4	40.8		78	9	5	27	52	0.20		0.20	0.0	1	20	6	5	w.	Do.
(6) Soda Butte	do	7,000	5	40.2		79	11	6	20†	53	1.14		0.37	3.0	4	25	2	4	sw.	Do.
(7) Sylvan Pass	do	7,000	3	39.5		77	11	1	28	58	1.39		0.72	3.0	3	20	4	7	w.	Do.
(8) Thumb	do	7,772	4	39.0		73	11	7	27	47	1.82		0.71	3.0	5	15	2	14	sw.	Do.
(9) Tower Falls	do	6,250	1	42.0		81	9	8	26	57	0.60		0.60	6.0	1	27	0	4	nw.	Do.
(10) Upper Gey. Basin	do	7,395	6	42.0		73	10†	10	27	48	0.93		0.60		3	16	0	15	se.	Do.
Montana.																				
Adams	Dawson		2	50.0		90	11	10	28	43	0.14		0.10	0.0	2	19	4	8	nw.	W. B. Ennis.
Adel	Cascade	5,200	11	47.6	+ 4.6	79	9	5	27	36	1.16	− 0.11	0.52	3.0	5	17	7	7	w.	Bessie F. Burch.
Agricultural College	Gallatin	4,700	12	46.5	+ 1.5	82	10	17	27	36	2.74	+ 1.52	0.87	0.0	6	12	16	3	sw.	E. Burke.
Augusta	Lewis & Clark	4,071	12																	C. C. Covington.
Babb	Teton	4,461	4	45.8		68	9	8	27	35	0.66		0.20	3.0	9	13	3	15	sw.	U. S. Reclamation Service.
Bald Butte	Lewis & Clark	6,500	1								1.66		0.70	8.6	9	15	8	8		Matt W. Alderson.
Big Timber	Sweetgrass	4,072	5	55.2		85	9†	15	27	50	0.93		0.50	0.0	3	26	0	5	w.	F. A. Severance.
Big Timber Creek	do										1.44		0.73	5.0	4	14	13	4	w.	J. T. Mjolsness.
Billings[§§]	Yellowstone	3,115	15	51.2	+ 0.8	91	9	19	20	52	1.34	+ 0.19	0.48	0.0	4				w.	U. S. Weather Bureau.
Boulder Nursery	Jefferson	4,920	14	42.0[d]	− 0.7	79	12	4	27	50	1.18	+ 0.72	0.27	1.2	8	17	10	4		U. S. Forest Service.
Bowen	Beaverhead	6,060	4	38.4		79	9	1	27	65	0.73		0.34		7	13	9	9		B. B. Lawrence.
Bridger	Carbon	3,664	2	50.2		85	10	14	27	52	2.02		0.72	T.	4	19	7	5	s.	L. E. Gard.
Broadview Exp. Station	Yellowstone		4	48.3		85	9	9	27	50	0.74		0.37	2.0	3	20	11	0	w.	Dr. W. X. Sudduth.
Busby	Rosebud		5	49.6		88	9	15	28	51	1.08		0.52	0.8	6	18	7	6	nw.	C. A. Linscheid.
Busteed	Sweetgrass		2	51.0		85	9†	16	27	48	1.11		0.59	4.0	5	19	8	4	w.	Thos. H. Busteed.
Cabin Creek	Beaverhead										0.65		0.32	5.4	4	23	0	8	sw.	W. J. Crowell.
Canyon Ferry	Lewis & Clark	3,644	12	48.5	+ 2.7	84	9	16	27	46	0.95	+ 0.34	0.36	0.0	6	19	5	7	nw.	A. C. Pratt.
Cascade	Cascade	3,361	5	52.5		86	9	13	27	43	0.87		0.47	1.0	5	22	7	2	sw.	E. E. James.
Chessman Reservoir	Lewis & Clark	5,275	2	43.5		74	10	7	27	37	1.75		0.63	9.2	8	20	4	7	sw.	Chas. D. Schmidt.
Chester	Chouteau	3,140	7																	Great Nor. Exp. Station.
Chinook	do	2,502	10	48.2[i]		87	8†	14	28	58[i]	0.11		0.05		3					Thos. O'Hanlon Co.
Chouteau	Teton	3,810	6																	Henry Davidson.
Clear Creek	Chouteau		4																	Cortez Sedgwick.
Clemons	Lewis & Clark	4,672	1								0.89		0.24	1.5	7	7	20	4	w.	Frank Eberl.
Clyde Park	Park		1								1.31		0.45	4.5	5	23	4	4	w.	L. B. Marquis, M.D.
Copper	Meagher		5								0.99		0.50	T.	4	17	10	4	w.	Orville Harris.
Crow Agency	Rosebud	3,041	28	50.0	+ 2.5	85	9†	17	20†	50	1.32	+ 0.19	0.47	T.	6	19	5	7	nw.	F. E. Server.
Culbertson	Valley	1,927	8																	G. H. Coulter.
Cut Bank	Teton	3,700	12	46.2	+ 4.3	78	10†	9	27	55	0.14	− 0.80	0.14		1	15	6	10	w.	Chas. N. Thomas.
Decker	Rosebud	3,400	6	44.4		72	10	18	17†	43	0.80		0.50		2					Adam Anderson.
Delpine	Meagher	5,000	1																	T. L. Holliday.

TABLE 1.—*Climatological data for October, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana—Cont'd.																				
Denton	Fergus		2																	P. T. Griesenauer.
Dillon	Beaverhead	5,147	13	49.9	+ 3.2	82	10	20	28	52	1.09	+ 0.21	0.27	T.	10	19	11	1	sw.	J. E. Monroe.
Dirty Creek	Meagher	6,000	1								1.09		0.40	T.	5	19	7	5	w.	Lewis Cameron.
Dry Creek	Broadwater	5,500	1																	J. C. Stuart.
Dry Wolf Camp	Cascade	6,000	1								2.73		1.00	10.5	5	16	5	10	sw.	Mrs. R. J. Eveleth.
East Gallatin River	Gallatin	6,000	1								2.37		0.61	2.0	6	21	7	3	w.	John Eberhart.
Ekalaka	Custer		10	51.2	+ 4.2	88	10	12	27†	40[b]	0.27		0.10	0.0	5	12[b]	9[b]	8[b]	w.	Wm. Freese.
Elkhorn	Jefferson	6,576	1								1.17		0.43	T.	7	16	6	9	w.	James Heagan.
Evans	Cascade	4,900	3																	H. Thrasher.
Fallon	Custer	2,208	6	49.7		90	9	10	20†	52	0.13		0.13	0.0	1	20	7	4	w.	Mrs. A. C. Gifford.
Family‖	Teton	3,950	1	46.8		76	8	14	27	47	0.31		0.20	1.0	4	11	12	8	w.	U. S. Reclamation Service.
Fish Creek‖	Silver Bow	8,500	1	41.6		68	9	10	27	28	1.37		0.85		3					O. B. Tilton.
Fish Tail Creek	Carbon	5,000	1																	O. E. Haskin.
Flathead Creek	Gallatin	6,000	1								2.64		0.71	3.4	6	14	11	6	nw.	L. G. Brown.
Forsyth	Rosebud	2,514	4	52.4		93	9	17	28	54	0.28		0.18	0.0	2	22	4	5	w.	J. M. Patterson, jr.
Fort Benton	Chouteau	2,630	30								0.67	+ 0.06	0.35		2					Jere Sullivan.
Fort Shaw	Cascade	3,500	22																	U. S. Reclamation Service.
Fort W. H. Harrison‖‖	Lewis & Clark	4,004	6	48.2		84	8	16	27	45						19	7	5	w.	Post Hospital.
Foster	Yellowstone		1	50.5		90	9	15	20	53	0.93		0.34		6	20	4	7	sw.	E. K. Bowman.
Garneil	Fergus	5,500	1																	Thos. E. Scully.
Glendive	Dawson	2,069	20								0.00	− 0.85	0.0	0.0	0					W. B. Walker
Goldbutte	Chouteau		3	46.4		81	8	11	27	47	0.28		0.24	T.	4	9	15	7	w.	J. T. Berthelote.
Graham	Custer		4	51.4[f]		89	7†	18	28	48[f]	1.17		0.50	0.3	7	17[e]	3[e]	6[e]	nw.	J. S. Rue.
Grayling	Gallatin	6,700	4																	P. Kersenmacher.
Great Falls	Cascade	3,350	19	53.1	+ 4.3	82	9	20	27	39	1.67	+ 1.04	1.03	0.0	6	13	15	3	sw.	S. H. Bauman.
Half Moon Pass	Fergus	6,500	1								1.94		0.50	8.0	10	9	18	4	w.	Thos. Stigen.
Half Way House	Broadwater	6,000	1								1 53		0.70	2.0	5	22	3	6	sw.	Gordon Deans.
Harlowton	Meagher	4,165	2	48.8		81	9	10	20	50	0.54		0.54	6.0	1	9	8	14	w.	Joseph Muir.
Havre	Chouteau	2,505	30	49.2	+ 5.6	88	9	14	28	49	0.08	− 0.42	0.08	0.0	2	11	12	8	sw.	U. S. Weather Bureau.
Helena	Lewis & Clark	4,110	30	48.4	+ 4.4	84	9	17	27	41	0.84	+ 0.02	0.31	0.5	8	11	12	8	w.	Do.
Highwood	Chouteau		3								1.84		0.85	4.0	8	15	6	10	sw.	W. S. McCord.
Home Park	Madison		5								1.22		0.56		5	23	5	3	e.	H. L. Miller.
Huntley	Yellowstone	3,014	4	53.0		90	9	20	19†	48	1.36		0.58	0.0	4	18	11	2	ne.	U. S. Reclamation Service.
Jones Canyon	Gallatin	6,800	1								3.10		0.91		7	24	0	7	w.	Jas. McCune.
Jordon	Dawson		5	54.2		92	4	10	28	55	0.17		0.10		2				nw.	W. C. Henderson.
Lewistown	Fergus	4,010	13	49.5[d]	+ 3.1	80	8†	7	28	57[d]	1.05	− 0.07	0.56	3.0	4	13[d]	11[d]	3[d]	ne.	W. W. Watson.
Livingston	Park	4,488	13	51.4[k]	+ 2.5	80	1	9	27	43										Lewis Terwilliger.
Lone Tree	Chouteau		5	53.0		87	9	22	27†	48	1.10		0.50	2.0	3	22	5	4	w.	E. Wilson.
Lost Horse Creek	Meagher	5,800	1								1.18		0.45	5.5	6	19	8	4	w.	C. M. Mason.
Malta	Valley	2,240	3	49.2		90	9	13	28	51	0.12		0.10	T.	3	16	14	1	w.	U. S. Reclamation Service.
Meadow Creek	Madison	6,700	1																	F. E. Parent.
Melstone	Fergus	2,903	1																	E. J. Parkinson.
Mildred	Custer		1								0.56		0.28	T.	3	17	9	5	nw.	Leon B. Clarke.
Miles City	do	2,371	19	53.2	+ 6.7	88	9	22	28	41	0.48	− 0.28	0.27	T.	5	16	13	2	s.	U. S. Weather Bureau.
Moore	Fergus		3								1.65		0.50	4.0	4	19	6	6	w.	Clyde Grove.
Norris	Madison	4,845	4	52.3		83	10	22	27	46	1.80		0.65		8	10	11	10	s.	Madison River Power Co.
Nye	Sweetgrass		2	45.0		81	10	6	29	49	2.32		0.60	12.5	8	25	2	4	sw.	F. L. Bryant.
Olsen Creek	Jefferson	6,345	1								1.94		0.51	1.6	7	18	5	8	w.	Robt. Olsen.
Pipestone Pass	do	7,000	1								2.09		0.53	1.0	7	11	16	4	w.	Mrs. Theola Kiermeyer.
Poplar	Valley	2,020	25	49.8	+ 5.0	92	9	12	20†	49	T.	− 0.69	T.	0.0	0	21	5	5	w.	H. M. Cozier.
Raymond‖‖	Teton	4,260	5	40.6		72	12†	6	26	47	0.37		0.37		1	16	8	7	w.	W. H. Campbell.
Red Lodge	Carbon	5,548	10	45.6	+ 2.5	80	9	− 1	27	46	2.64		1.00	10.0	6	12	16	3	se.	I. A. Draper.
Reese Creek	Gallatin	5,000	1																	Henry Cramer.
Renova	Jefferson	4,383	11	49.4	+ 2.5	82	9	15	27	49	1.02	+ 0.15	0.25	0.0	7	14	5	12	sw.	F. B. Elmer.
Rimini	Lewis & Clark	7,900	2																	Milo Brooks.
Ryegate	Yellowstone	3,640	1	53.7		88	7	26	15	50	0.75		0.60	T.	2	22	3	6		H. W. Scherfenberg.
Sedan	Gallatin	3,155	2																	Asa Hennes.
Springbrook	Dawson		9	51.3		99	9	12	28	62	0.26		0.21	T.	2	7	16	8	sw.	Mrs. H. L. Miller.
Stearns	Lewis & Clark	4,500	1								1.25		0.75	0.0	2	16	4	11		J. W. Hardgrove.
Three Forks	Gallatin	4,066																		A. A. Adams
Toknat‖‖	Dawson	2,050	5	50.3		93	8	16	19	52	T.		T.	0.0	0	18	6	7	w.	U. S. Reclamation Service.
Townsend	Broadwater	3,790	1								0.10									River Observer.
Trail Creek	Park	6,000	1								3.46		0.68	4.2	7	20	5	6	w.	Andrew Wiedenbauer.
Utica	Fergus	5,000	16	48.6	+ 2.4	80	8†	10	27	41	1.43	+ 0 30	0.90		5	26	1	4	w.	P. W. Korell.
Valentine	do		4	50.2		90	9	18	28	52	0.87		0.49	0.0	3	17	7	7	w.	B. M. Bean.
Virginia City	Madison	5,880	22	46.4	+ 3.0	77	10	15	27	32	1.06	+ 0.16	0.32		5	19	8	4	w.	Francis Mailand.
Wall Rock Mountain	Broadwater	5,600	1								1.05		0.60	0.1	4	16	12	3	nw.	D. L. Doig.
Warm Springs Creek	Madison	7,500	1								1.39		0.70	3.4	7	11	7	13	w.	M. D. Lytle.
Willow Creek	Park	9,000									1.56		0.47	3.7	4	15	13	3	w.	John Topp.
Wolf Creek	Lewis & Clark	4,000	5	52.4		83[e]	8	17[e]	27	37[e]	0.44		0.27	T.	4	16	5	10	w.	A. W. Verharen.
Wolf Point	Valley	1,995									0.00		0.00	0.0						River Observer.
Woodville	Jefferson	6,376	1								1.21		0.50	1.0	6	13	13	5	w.	Anna Kinman.
North Dakota.																				
Aplin	Oliver		3	49.4		92	10	11[e]	28	52	0.99		0.80	0.5	3	14	12	5	n.	J. B. Hagelbarger.
Beach	Billings	2,759	3	48.2		91	10	9	28	45	0.54		0.22	0.2	6	19	9	3	nw.	D. J. Steiner.
Berthold Agency	McLean	2,082	13	48.6	+ 2.2	93	10	5	28	59[b]	0.46	− 0.28	0.20	0.5	4	18	7	6	n.	C. L. Hall.
Bismarck	Burleigh	1,674	35	50.0	+ 5.9	91	10	17	28	50	0.75	− 0.28	0.74	T.	3	13	8	10	nw.	U. S. Weather Bureau.
Broncho	Mercer		2	47.0		80	15	15	27	55	1.44		0.72	0.0	4	2	24	5	nw.	E. M. Walker.
Buford	Williams	1,944	4	49.8		91	9†	12	28	53	0.01		0.01	0.0	1	15	0	16	w.	G. O. Sanford.
Coal Harbor	McLean	1,901	13																	F. H. Childs.
Dickinson	Stark	2,453	17	48.4	+ 4.2	90	9†	7	20	52	0.54	− 0.04	0.15	0.8	7				nw.	L. R. Waldron.
Edgeley	Lamoure	1,468	8	49.9	+ 6.4	89	10	17	20†	48	0.15	− 0.83	0.10	T.	3	13	6	12	nw.	O. A. Thompson.
Epping	Williams		2								0.17		0.05	T.	4	19	7	5	nw.	M. E. Ugan.
Fullerton	Dickey	1,439	11	49.5	+ 5.0	85	2†	15	21	44	0.10	− 1.34	0.10	T.	1	20	6	5	nw.	F. O. Alin.
Haley	Bowman		2	57.2		89	9†	29	27	38	0.69		0.31	T.	5	17	4	10	nw.	A. M. Oberchain.
Hettinger	Adams	2,253	3	50.6		89	9†	13	28	50	0.51		0.40	T.	3	16	10	5	nw.	F. E. Ellickson.
Howard	Williams	2,275	3	44.2		86	9†	5	28	59	0.20		0.17	1.7	3	10	10	11	nw.	C. P. Amsbaugh.
Jamestown	Stutsman	1,390	22	47.0	+ 0.9	75	7†	16	21	40	0.04	− 0.93	0 04	0.0	1	14	4	13	nw.	L. B. Baldwin.
Lamoine	Kidder		2	46.8		92	10	10	28	47[e]	0.53		0.53	0.0	2				nw.	E. V. Virgin.
Lamoure	Lamoure	1,307	3								0.45		0.45		1					E. O. Ellison.
McHenry	Eddy	1,509	1	47.2		84	10	15	28	45	0.34		0.34	T.	1	15	12	4	nw.	John Knox.
Manfred	Wells	1,605	8	47.7		88	10	15	28	47	0.79		0.50	T.	3	14	13	4	sw.	P. B. Anderson.
Marmarth	Bowman		2								0.64		0.18	T.	6	18	4	9	nw.	S. P. Grane.
Marstonmoor	Stutsman		2	45.5		93	7	3	20	80	0.17		0.17	T.	1	11	14	6	nw.	H. H. McCumber.
Medora	Billings	2,225	13	48.8	+ 3.7	94	9	14	20	60	0.72	+ 0.16	0.42	T.	2	17	7	7	e.	J. W. Hesser.
Melville	Foster	1,590	12	48.7	+ 4.8	96	10	14	28	44[d]	0.23	− 1.32	0.23	T.	1				nw.	J. P. Kidder.
Mott	Hettinger		3	45.4		87	9	10	14	43	0.94		0.32	0.5	5	13	9	9	w.	O. H. Opland.

TABLE 1.—*Climatological data for October, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
North Dakota—Cont'd.																			
Napoleon	Logan	1,955	18	50.0	+ 6.2	93	10	9	20	53	0.25	− 0.71	0.25	0.0	1	18	3	10	nw.	C. J. Hoof.
New England	Hettinger	2,400	14	46.0	+ 2.0	89	10	0	20	51	0.40	+ 0.21	0.20	T.	2				nw.	W. C. McKenzie.
New Salem	Morton	2,163	[3]	50.5		91	10	14	28	44	1.55		1.38	0.5	5	12	11	8	s.	J. Christianson.
Orange	Adams		[3]	49.8		87	10	8	20	54	0.26		0.10	0.0	3	22	3	6	nw.	J. E. Goforth.
Palermo	Ward	2,200	6																	T. A. McCann.
Schafer	McKenzie		1	48.3		91	9†	0	20	50	0.13		0.5	T.	3	14	8	9	nw.	F. L. Clark.
Steele	Kidder	1,857	14																	B. C. Smith.
Washburn	McLean	1,731	6	50.0		92	10	15	28	48	1.41		1.41	T.	1	17	10	4	w.	W. R. Peterson.
Williston	Williams	1,875	30	47.4		90	10	13	28	56	0.04		0.03	T.	2	6	14	11	s.	U. S. Weather Bureau.
Wishek	McIntosh	2,010	5																	H. E. Timm.
South Dakota.																				
Aberdeen	Brown	1,300	20	52.8	+ 7.2	92	2†	18	21	53	1.07	− 0.71	0.65	T.	3	23	6	2	nw.	D. G. Gallett.
Academy	Charles Mix		11	57.5	+ 6.0	94	11	20	21†	52	0.36	− 1.20	0.28	T.	2	25	4	2	nw.	I. T. Lothrop.
Alexandria	Hanson	1,352	21	54.6	+ 4.8	93	2	22	28	50	1.00	− 0.92	0.65	T.	2	19	10	2	se.	W. S. Hill.
Ardmore	Fall River	3,557	1								0.90		0.50	0.0	2	23	2	6	e.	Chi., Burl. & Quincy R. R.
Armour	Douglas	1,521	15																	T. J. Markey.
Belle Fourche	Butte	3,000	2	51.0		88	9	17	28	51	0.63		0.20	0.0	4	16	10	5	w.	U. S. Reclamation Service.
Brookings	Brookings	1,636	21	53.0	+ 6.9	93	11	20	28	52	0.38	− 1.01	0.25	T.	3	11	13	7	nw.	Experiment Station.
Camp Crook	Harding	3,000	18																	U. S. Forest Service.
Canton	Lincoln	1,248	15	54.4	+ 4.4	92	12	20	29	59	1.13	− 0.73	1.13	T.	1	26	4	1	se.	John H. Holsey.
Cascade Springs	Fall River	3,422	2	51.5		92	10	19	20	61	2.66		0.98	0.0	4	22	3	6	nw.	Fred Noerenberg.
Castlewood	Hamlin	1,685	4	52.4		89	2	19	28†	50	0.45		0.26	T.	2	15	9	7	nw.	M. N. Bradley.
Centerville	Turner	1,229	13	54.9		90	16	22	28	47	1.30	− 0.52	1.01	0.2	3	19	6	6	se.	Frank Williams.
Chamberlain	Brule	1,363	13	58.2[i]	+ 6.4	95	11	17	28	43[i]	0.54	− 0.72	0.54	T.	1				nw.	G. A. Fry.
Clark	Clark	1,779	16	52.6	+ 5.0	90	2	18	28	49	1.16	− 0.45	0.66	T.	3	17	11	3	nw.	O. H. LaCraft.
Cottonwood	Stanley	2,414	2	53.6[e]		98	16	12[f]	20†	57[f]	0.32		0.20	T.	2	21	8	2	nw.	Experiment Station.
Crow Creek	Buffalo	1,385									0.56		0.54	0.0	2	21	2	8	s.	William Fuller.
Daviston	Perkins		1	52.4[k]		91	11	8	20	54[k]										G. G. Davis.
Deadwood	Lawrence	4,535	1	49.6		89	11	10	20†	44	2.45		0.85	5.5	6	23	1	7		R. E. Grimshaw.
Deerfield	Pennington	6,000	1								0.54		0.20	2.3	6	22	2	7	nw.	Frank E. Miller.
De Smet	Kingsbury	1,726	17	53.9	+ 6.7	92	11	19	28	52[b]	0.80	− 0.92	0.80	T.	1	23	5	3	se.	J. O. Purintun.
Dowling	Stanley	2,250	1	56.2		93	11	15	28	48	0.36		0.26	T.	2	13	11	7		M. P. Dowling.
Dumont	Lawrence	6,195	1								1.52		0.56	5.0	7	20	6	5	nw.	A. B. Wood.
Elk Mountain	Custer	4,700	1								0.40		0.19	T.	4	22	1	8	nw.	James E. Blaine.
Elk Point	Union	1,127	11	55.4	+ 2.0	85	16	21	31	42	1.10	− 1.19	1.00	T.	2				se.	M. Hoffman, jr.
Englewood	Lawrence	5,723	1								1.20		0.40	4.5	5	21	0	10	s.	T. J. Cummins.
Eureka	McPherson	1,884	1	52.8		92	10	13	28	52	0.18		0.10		3	8	19	4	nw.	Experiment Station.
Faulkton	Faulk	1,595	15	53.4	+ 6.7	89	16	13	28	49	0.26	− 0.95	0.24	T.	2	25	0	6	w.	Miss Belle Talcott.
Flandreau	Moody	1,565	20	54.0	+ 6.0	93	11	20	28†	50	1.08	− 0.65	0.85	0.5	4	18	9	4	s.	W. A. Harris.
Forestburg	Sanborn	1,231	18	55.8	+ 7.1	100	11	22	21†	58	0.65	− 0.96	0.65	T.	1	20	7	4	se.	S. S. Judy.
Fort Meade	Meade	3,624	28			90	9	21	20	....	0.52	− 0.52	0.20	2.0	4	14	14	3	w.	Post Hosiptal.
Frederick	Brown	1,371	3																	J. E. Jeffers.
Gannvalley	Buffalo		12	56.4	+ 6.1	98	11	16	21†	53	0.55	− 0.46	0.55	T.	1	17	10	4	nw.	V. P. Drips.
Greenmont	Lawrence	6,430	1								1.94		0.85	9.0	5	19	7	5	s.	H. C. Hoffbuhr.
Greenwood	Charles Mix		16	59.6	+ 7.6	98	10	22	28	48	1.07	− 0.75	0.51	0.2	5	18	11	2	nw.	T. C. Williamson.
Hardy Ranger Station	Lawrence	6,600	1																	Mrs. Mary E. Seals.
Harvey's Ranch	....do	6,282									1.34		0.85	1.2	3	20	4	7	w.	Jerome Harvey.
Hermosa	Custer	3,278	4	54.6		96	9	17	27	51	0.39		0.18	0.0	4	20	10	1		S. M. Booth.
Highmore	Hyde	1,890	14	55.4	+ 7.2	95	11	9	28	58	0.24	− 0.90	0.20	T.	3	17	7	7	nw.	Experiment Station.
Hill City	Pennington	5,067	1								0.62		0.37	0.0	3	15	5	11	nw.	Geo. A. Karr.
Hopewell	Stanley			56.0		94	11	15	28	57	0.73		0.70	0.0	2	19	9	3	nw.	E. R. Myers.
Howard	Miner	1,564	18	53.9	+ 6.5	95	11	14	28	47	0.90	− 0.95	0.60	0.0	3	20	6	5	s.	J. J. Cox.
Howell	Hand		8	53.5		94	2†	15	28	58	0.47		0.25	0.1	4	22	5	4	nw.	M. A. Shuster, jr.
Huron	Beadle	1,306	28	54.0	+ 9.3	94	2	21	28	46	0.52	− 0.82	0.41	T.	4	14	10	7	s.	U. S. Weather Bureau.
Ipswich	Edmunds	1,530	13	52.2	+ 6.2	90	16	15	28	50	0.15	− 1.06	0.15	0.0	1	25	3	3	nw.	J. B. Taylor.
Kadoka	Stanley	2,467	1	54.6		97	9	17	28	48	1.10		0.88	T.	4	18	9	4	nw.	Rev. D. S. Brown.
Kennebec	Lyman	1,689	17	54.3	+ 4.9	97	11	4[e]	27	59[e]	0.63	− 0.36	0.50	0.0	3	23	4	4	nw.	R. C. Van Horn.
Kidder	Marshall	1,295	6	50.7		91	10	16	27	51	0.25		0.25	T.	1	24	3	4	sw.	H. C. Schussler.
Kimball	Brule	1,788	21	55.4	+ 6.9	92	11	16	28	51	0.59	− 0.53	0.59	T.	1	23	6	2	nw.	G. D. Rose.
La Delle	Spink	1,400	13																	E. L. Ebbert.
Lead[j]	Lawrence	5,200	1	52.2		85	11	13	20	41	1.48		0.62	5.5	6	19	5	7	nw.	E. F. Irwin.
Lemmon	Perkins	2,345	1	50.7		87	10	11	28	45	0.51		0.25		3	20	8	3	nw.	W. E. Lyman.
Marion	Turner	1,447	9	55.7		92	11	22	28	47	1.24		1.01	0.0	2	20	7	4	se.	M. H. Dains.
Marston	Sully		2	53.0		97	10	7	28	58	0.19		0.19	0.0	1	21	5	5	nw.	John S. Walker.
Mellette	Spink	1,300	15	53.8	+ 6.1	93	2	20	21†	54	1.02	− 0.62	0.74	T.	3	21	7	3		Frank A. Howe.
Menno	Hutchinson	1,325	13	56.4	+ 5.7	93	16	21	28	44	0.91	− 1.08	0.53	0.1	3	22	6	3	se.	J. H. Swanton.
Milbank	Grant	1,148	19	52.5	+ 5.0	93	2	21	29	51	2.62	+ 0.97	2.25	T.	3	17	1	13	nw.	I. T. Patridge.
Mitchell	Davison	1,312	16	54.6	+ 4.6	95	11	22	28	53	0.57	− 1.45	0.54	0.0	3	20	8	3	s.	C. W. Downey.
Murdo	Lyman	2,300	2	57.1		95	11	18	28	50	1.10		0.70	0.0	3	22	7	2	nw.	L. C. Bode.
Oelrichs	Fall River	3,339	18	55.4	+ 7.2	95	8	10	20	69	1.05	− 0.27	0.40	0.5	4	12	16	3	nw.	J. E. Strouse.
Orman	Butte	2,920	4	52.5		89	9	23	28	57	0.72		0.43	0.5	4	16	7	8	w.	U. S. Reclamation Service.
Ottumwa	Stanley		2	52.6		93	11	10	28	55[a]	0.40		0.33	0.0	2	22	6	3	nw.	J. W. Bretz.
Pierre	Hughes	1,572	18																	U. S. Weather Bureau.
Plankinton[j]	Aurora	1,528	16								0.60	− 1.29	0.41	T.	3	20	9	2	sw.	W. G. Andrews.
Pollock	Campbell		4	50.0		92	11	11[a]	21	55[a]	0.35		0.20	T.	2	16	9	6	nw.	J. H. Jones.
Rapid City	Pennington	3,251	22	54.0	+ 7.4	88	11	21	28	46	0.41	− 0.69	0.24	1.0	5	16	7	8	w.	U. S. Weather Bureau.
Redfield	Spink	1,295	12	53.0	+ 6.2	92	2†	19	29	52	1.52	+ 0.02	1.50	0.0	2	19	3	9	sw.	A. S. Hall.
Rochford	Pennington	5,228									0.70		0.20	2.8	4	21	3	7	nw.	Mrs. M. E. Deffenbaugh.
Rosebud	Meyer	2,600	16	54.8	+ 6.5	93	10	13	28	47	0.76	− 0.16	0.50	2.0	3	20	9	2	nw.	W. M. Ege.
Roslyn	Day		4	51.6		91	2	16	28	47	0.89		0.45	T.	3	18	8	5	nw.	O. O. Floren.
Savoy	Lawrence	4,500	1																	M. J. Hall.
Selby	Walworth		2	54.6		88	10†	14	28	51	0.23		0.12	T.	3	13	10	8	nw.	Miss Gertrude Hall.
Sioux Falls	Minnehaha	1,400	19	56.6	+ 7.3	90	2†	20	28	45	0.64	− 1.05	0.30	T.	4	21	5	5	s.	J. H. Bechtold.
Spearfish	Lawrence	3,647	20	54.2	+ 5.0	85	9	21	28	35[a]	1.34	− 0.01	0.63	T.	5	14	10	7	nw.	O. A. Martin.
Stephan	Hyde	1,840	6	53.2		94	10	9	21	54	0.12		0.12	T.	1	17	9	5	nw.	Rev. A. Mattingly.
Tama	Meade		1	52.6		89	9†	10	20	46	0.11		0.06	T.	2					J. J. Daly.
Vale	Butte	2,765	2	52.5		90	11	17	28	55[a]	0.58		0.41	T.	3	21	6	4	nw.	U. S. Reclamation Service.
Vermilion	Clay	1,222	9	56.6		89	11	22	28	42	1.57		1.36	T.	3	25	2	4	se.	Prof. E. C. Perisho.
Waters' Ranch	Lawrence	4,000									1.59		0.46	1.4	7	18	5	8	nw.	George Waters.
Watertown	Codington	1,735	16	52.2	+ 7.0	88	16	20	28	45	1.05	− 0.61	1.05	T.	1	20	4	7	s.	Robert Q. Wood.
Wentworth	Lake		17	53.6	+ 5.9	94	11	18	28	49	0.72	− 0.98	0.40	0.0	3	23	4	4	s.	R. C. Zimmerman.
White Lake	Aurora	1,646	1								1.09		0.82	T.	2	24	4	3	s.	Mrs. G. A. Rogers.
Winner	Tripp	2,500																		A. L. Rawson.
Yankton	Yankton	1,234	36	56.5	+ 6.0	91	11	24	28	39	1.64	+ 0.07	0.92	T.	3	14	14	3	w.	U. S. Weather Bureau.
Minnesota.																				
Pipestone	Pipestone	1,710	11	53.9	+ 5.8	91	11	19	28	49	0.75	− 1.08	0.53	0.8	3	16	10	5	sw.	W. S. Campbell.

TABLE 1.—*Climatological data for October, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Akron	Washington	4,650	8	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.5	0	.....	.....	.....	.....	Ira M. Barnhouse.
Alma	Park	10,238	13	.....	.....	.....	.....	.....	.....	.....	0.27	− 0.55	0.27	6.0	1	27	0	4	w.	F. H. Clark.
Arriba (near)	Lincoln	5,238	4	53.4	.....	87	15	11	28	51	0.09	.....	0.03	T.	4	28	2	1	n.	C. A. Creel.
Auldhurst	Teller	8,500	...	.....	.....	.....	.....	.....	.....	.....	1.28	.....	0.62	9.0	6	13	13	5	s.	Mrs. Alice A. Auld.
Boreas	Park	11,489	...	.....	.....	.....	.....	.....	.....	.....	1.39	.....	0.35	11.4	7	13	9	9	nw.	Frank Soper.
Boulder	Boulder	5,347	14	54.5	+ 2.0	88	10	18	28	46	1.05	− 0.41	0.57	T.	5	18	10	3	w.	O. H. Wangelin.
Burlington	Kit Carson	4,160	6	57.0	.....	88	1†	14	28	46	0.06	.....	0.06	0.0	1	23	6	2	nw.	W. P. Davis.
Cassells	Park	8,445	...	.....	.....	.....	.....	.....	.....	.....	0.82	.....	0.31	3.1	6	18	8	5	w.	Harriet M. Cassell.
Castle Rock	Douglas	6,220	18	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. Tunnicliff.
Cheesman	Jefferson	6,890	7	50.4	.....	87	9	14	27	49	1.50	.....	1.25	4.0	2	21	9	1	sw.	J. G. Thornburg.
Cheyenne Wells	Cheyenne	4,279	18	56.6	+ 4.5	89	1	16	28	47	T.	− 0.88	T.	0.0	0	26	2	3	s.	J. W. Adams.
Cope	Washington	.....	12	56.6	+ 5.5	89	10	12	28	56	0.76	− 0.36	0.40	0.0	2	20	7	4	s.	A. A. Williams.
Corona	Grand	11,660	3	30.0	.....	60	9	2	21	28	.....	.....	.....	.....	.....	.....	.....	.....	w.	U. S. Weather Bureau.
Denver	Denver	5,272	38	55.4	+ 4.4	89	10	19	28	40	0.21	− 0.75	0.15	0.4	5	15	15	1	s.	Do.
Edgewater	Jefferson	5,450	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. N. P. Levin.
Estes Park Fish Hatchery	Larimer	8,000	...	.....	.....	.....	.....	.....	.....	.....	0.67	.....	0.40	3.0	3	11	14	6	w.	Gaylord H. Thomson.
Fort Collins	...do	4,985	31	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Colorado Agri. College.
Fort Morgan	Morgan	4,319	12	53.7	+ 4.0	98	23	10	28	78	0.08	− 0.80	0.08	0.0	1	17	12	2	nw.	Della M. Scott.
Frances	Boulder	9,300	5	43.4[d]	.....	72[d]	9	5[d]	20	38[d]	0.92	.....	0.67	13.0	4	.....	.....	.....	w.	D. A. Barry.
Fry's Ranch	Larimer	7,500	...	46.5	.....	83	9	7	20	47	1.07	.....	0.75	1.0	5	19	10	2	w.	Norman W. Fry.
Georgetown	Clear Creek	8,550	9	.....	.....	.....	.....	.....	.....	.....	0.71	.....	0.26	5.0	5	19	9	3	.....	H. L. Corbett.
Greeley	Weld	4,649	13	52.2	+ 2.5	91	10	16	28	59	1.06	+ 0.23	1.06	0.0	1	23	4	4	ne.	Nelson Reynolds.
Grover	...do	5,076	...	53.0	.....	88	10	20	19	50	1.19	.....	1.19	T.	1	23	3	5	sw.	Geo. M. Blake.
Hartsel	Park	7,670	...	.....	.....	.....	.....	.....	.....	.....	0.26	.....	0.21	0.4	3	22	7	2	.....	Emily Kleinknecht.
Hawthorne	Boulder	6,000	2	.....	.....	.....	.....	.....	.....	.....	1.31	.....	0.94	9.0	3	26	3	2	.....	B. E. Chesebro.
Holyoke (near)	Phillips	3,745	14	.....	.....	.....	.....	.....	.....	.....	0.00	− 1.35	0.00	0.0	0	25	4	2	se.	A. C. Cauble.
Idaho Springs	Clear Creek	7,534	10	48.1	+ 3.7	83	9	12	20	41	0.65	− 0.73	0.25	4.5	5	9	20	2	w.	J. J. Willis.
Keota	Weld	4,966	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. J. Farrell.
Kossler	Boulder	7,720	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	East Colo. Power Co.
La Porte	Larimer	5,053	19	.....	.....	.....	.....	.....	.....	.....	0.78	− 0.22	0.78	0.0	1	.....	.....	.....	.....	P. A. Taft.
Le Roy (near)	Logan	4,380	20	.....	.....	.....	.....	.....	.....	.....	0.13	− 0.83	0.06	T	3	.....	.....	.....	.....	Chas. Green.
Longmont	Boulder	4,980	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Great Western Sugar Co
Long's Peak (near)	Larimer	8,600	15	42.2	+ 2.9	76	9	−10	20	50	1.25	− 0.27	1.00	12.0	3	18	11	2	nw.	Enos A. Mills.
Moraine	...do	7,775	20	47.2	+ 4.6	79	10	− 1	20	45	.....	.....	.....	.....	.....	18	10	3	w.	J. D. Stead.
Platte Canon	Jefferson	5,492	11	.....	.....	.....	.....	.....	.....	.....	0.39	− 0.82	0.20	0.9	2	20	9	2	sw.	Denver Union Water Co.
St. Cloud	Larimer	7,750	7	.....	.....	.....	.....	.....	.....	.....	0.75	.....	0.48	T.	3	22	8	1	nw.	Miss Guilla Sivers.
Sedgwick	Sedgwick	3,573	2	54.2	.....	95	10	15	21	60	0.10	.....	0.10	0.0	1	21	8	2	se.	Dr. Edwin Lewis.
Sill Mine	Clear Creek	11,500	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Chas. F. Deininger.
Silver Lake	Boulder	.....	...	.....	.....	.....	.....	.....	.....	.....	2.01	.....	1.00	14.0	5	14	14	3	e.	Clair V. Mann.
Spicer (near)	Larimer	8,700	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank W. Murphy.
Sterling	Logan	3,892	...	53.6	.....	97	7	11	28	64	0.06	.....	0.04	0.0	2	21	6	4	e.	Great Western Sugar Co.
Waterdale	Larimer	5,206	7	53.2	+ 4.9	88	10	17	28	50	0.96	− 0.12	0.85	1.3	3	.....	.....	.....	.....	P. H. Boothroyd.
Westlake	Boulder	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. R. Keeney.
Wray	Yuma	3,512	14	56.0	+ 4.8	92	7†	14	28	57	0.05	− 0.94	0.05	0.0	1	23	7	1	nw.	J. C. Tuomey.
Yuma	...do	4,138	19	.....	.....	.....	.....	.....	.....	.....	0.23	− 0.78	0.23	0.0	1	26	1	4	nw.	Jean Deaken.
Nebraska.																				
Ainsworth	Brown	2,521	5	57.8	.....	96	10	20	21†	45	0.42	.....	0.27	T.	2	4	24	3	sw.	John M. Cotton.
Albion	Boone	1,747	12	55.4[c]	+ 2.8	89	17	17	28	52[d]	1.55	− 0.59	1.38	T.	2	.....	.....	.....	s.	F. M. Weitzel.
Alliance	Boxbutte	3,968	15	50.5	+ 2.4	88	9†	8	28	56	0.20	− 0.59	0.20	T.	1	23	8	0	sw.	J. A. Keegan.
Alma	Harlan	1,939	13	57.6	+ 3.2	89	2	18	21†	51	0.68	− 1.18	0.63	0.0	3	27	2	2	s.	W. A. Sharpnack
Anoka	Boyd	.....	4	55.8	.....	97	10	14	21	57	0.35	.....	0.35	T.	1	14	14	3	nw.	W. Whitla.
Arcadia	Valley	2,186	11	.....	.....	.....	.....	.....	.....	.....	1.46	− 0.25	1.46	T.	1	24	4	3	nw.	Jas. L. Owen.
Ashland	Saunders	1,100	27	58.4	+ 3.4	87	2	26	28	39	0.88	− 1.25	0.84	T.	2	24	4	3	s.	Dr. A. S. von Mansfelder.
Ashton	Sherman	2,061	17	.....	.....	.....	.....	.....	.....	.....	0.82	− 0.92	0.74	T.	3	25	2	4	sw.	F. Rein.
Atkinson	Holt	2,108	4	56.1	.....	95	10	17	28	55	0.20	.....	0.20	0.0	1	26	3	2	nw.	Chas. J. Wilson.
Auburn	Nemaha	1,061	18	58.5	+ 2.6	87	2†	25	29	43	0.48	− 2.23	0.31	T.	2	25	3	3	s.	J. R. Huffman.
Aurora	Hamilton	1,792	15	58.6	+ 4.9	86	9†	20	28	43	1.67	− 0.64	1.30	0.0	2	21	7	3	s.	Chi., Burl. & Quincy R. R.
Beatrice	Gage	1,235	19	57.6	+ 2.7	86	2	25	28	40	0.80	− 1.41	0.64	0.0	2	26	2	3	sw.	Wm. S. Waxham.
Beaver City	Furnas	2,147	19	58.6	+ 4.0	90	10	19	28	55	0.12	− 1.17	0.12	0.0	1	18	12	1	nw.	T. M. Davis.
Bellevue	Sarpy	1,210	28	58.0	.....	85	16	25	29	42	0.85	− 1.21	0.68	T.	4	24	3	4	se.	Prof. A. A. Tyler.
Benkelman	Dundy	2,968	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. D. Druliner.
Bertrand	Phelps	2,515	2	.....	.....	.....	.....	.....	.....	.....	0.72	.....	0.43	0.0	2	20	9	2	.....	W. F. Dobbin.
Blair	Washington	1,122	15	57.7	+ 4.1	85	15†	25	29	39	1.01	− 1.24	0.91	T.	3	26	2	3	sw.	H. H. Hahn.
Bloomfield	Knox	.....	4	55.8	.....	90	11†	20	28	45	1.42	.....	1.02	T.	2	24	3	4	nw.	Dr. L. C. Bleick.
Bradshaw	York	1,715	11	.....	.....	.....	.....	.....	.....	.....	1.80	− 1.55	1.38	T.	2	26	3	2	.....	E. C. Roggy.
Bridgeport	Morrill	3,658	14	49.7	+ 0.7	90	10	7	28	60	0.02	− 0.77	0.02	0.0	1	.....	.....	.....	nw.	R. H. Willis.
Brokenbow	Custer	2,477	15	54.0[d]	+ 3.8	93	12	12	24	59[d]	0.18	− 1.57	0.18	0.0	1	.....	.....	.....	.....	Chi., Burl. & Quincy R. R.
Burge	Cherry	2,674	4	51.8	.....	90	11†	11	21	63	0.25	.....	0.25	T.	1	23	2	6	e.	H. A. Davis.
Cairo	Hall	1,951	1	.....	.....	.....	.....	.....	.....	.....	2.09	.....	1.60	0.0	2	.....	.....	.....	.....	Elliott Harrison.
Callaway	Custer	2,555	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. H. Evans.
Cambridge	Furnas	2,258	3	58.5	.....	94	10	15	28	52	0.26	.....	0.20	T.	2	23	5	3	n.	Chas. Jensen.
Canton (near)	Sioux	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. E. Hann.
Columbus	Platte	1,442	17	57.6	+ 5.0	94	3	26	28	44	1.59	− 0.38	1.32	0.0	3	26	0	5	nw.	C. C. Gray.
Cozad	Dawson	2,496	2	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.15	0.0	2	25	4	2	s.	A. A. Luttin.
Creighton	Knox	1,600	13	55.6	+ 7.4	90	15	18	27	42	1.82	+ 0.54	0.80	T.	4	19	5	7	s.	W. L. Kirk.
Crete	Saline	1,368	27	58.4	+ 4.4	85	13†	24	28	38	1.10	− 1.05	0.90	0.0	2	24	3	4	s.	Doane College.
Culbertson	Hitchcock	2,565	23	58.3	.....	96	8	18	20	55	0.00	− 1.10	0.00	0.0	0	22	5	4	nw.	J. H. Corrick.
Curtis	Frontier	2,553	13	54.8	+ 2.6	89	10	15	21	56	0.00	− 1.27	0.00	0.0	0	24	3	4	s.	Dr. S. R. Razee.
David City	Butler	1,619	21	57.6	+ 6.3	84	2†	22	28	37	1.13	− 1.01	0.95	T.	2	18	10	3	se.	S. Clingman.
Dawson	Richardson	945	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. E. I. Atkinson.
Dubois	Pawnee	1,074	5	.....	.....	.....	.....	.....	.....	.....	0.59	.....	0.40	T.	2	25	2	4	s.	O. M. Backus.
Ellis	Gage	1,430	5	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.93	0.0	1	.....	.....	.....	.....	D. J. Wood.
Elmcreek	Buffalo	2,268	2	.....	.....	.....	.....	.....	.....	.....	0.60	.....	0.31	0.0	2	.....	.....	.....	.....	E. L. Sutton.
Elsie	Perkins	3,382	2	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	0.0	0	.....	.....	.....	.....	J. F. Brittain.
Enderslake	Brown	.....	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	G. W. Chappell.
Ewing	Holt	1,888	18	56.1	.....	96	10	16	28	68	0.62	− 1.11	0.39	0.0	2	.....	.....	.....	.....	G. H. Benson.
Fairbury	Jefferson	1,316	35	58.5	+ 3.4	90	2	25	28†	43	0.71	− 1.52	0.53	0.0	2	22	5	4	se.	W. F. Cramb.
Fairmont	Fillmore	1,641	17	55.4	+ 2.5	89	22	20	28	65	0.85	− 1.86	0.78	0.0	2	23	1	7	s.	Chi., Burl. & Quincy R. R.
Fort Robinson	Dawes	3,764	26	49.3	+ 0.9	93	10	13	29	62	0.90	− 0.37	0.33	0.0	4	25	0	6	w.	Post Hospital.
Franklin	Franklin	1,820	19	59.8	+ 6.2	90	1†	18	21	57	1.12	− 0.63	0.58	0.0	2	19	8	4	s.	Jesse H. Naden.
Fremont	Dodge	1,203	30	56.8	+ 4.1	88	2	24	28†	46	1.06	− 1.16	0.90	T.	2	21	7	3	se.	Ernest Hahn.
Fullerton	Nance	1,629	8	55.4	.....	88	16	20	21†	49	2.00	.....	2.00	T.	1	22	9	0	s.	Dr. F. W. Johnson.
Geneva	Fillmore	1,633	20	58.1	+ 3.9	87	2	22	28	44	0.12	− 2.27	0.12	T.	1	25	2	4	se.	F. M. Flory.
Genoa	Nance	1,584	35	56.8	+ 5.8	87	2	22	28	45	1.95	+ 0.19	1.70	T.	2	25	3	3	s.	F. W. Parsons.
Gordon	Sheridan	3,550	8	50.6[d]	.....	95	10	4	26	66[d]	T.	.....	T.	T.	0	.....	.....	.....	nw.	G. F. Williams.
Gosper	Gosper	.....	8	.....	.....	.....	.....	.....	.....	.....	0.10	.....	0.10	0.0	1	20	10	1	nw.	E. H. Stoll.
Gothenburg	Dawson	2,557	16	58.0	+ 5.6	95	10	15	28	55	0.80	− 0.73	0.80	T.	1	22	4	5	nw.	Dr. W. J. Bartholomew.

TABLE 1.—*Climatological data for October, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Nebraska—Cont'd.																			
Grand Island	Hall	1,860	19	57.9	+ 5.1	90	16	21	21†	50	1.45	− 1.08	1.20	T.	2	23	4	4	sw.	E. A. Barnes.
Grant	Perkins	3,405	7	53.8°		93	10	10	28	64[4]	0.02		0.02	0.0	1				nw.	Cyrus Carver.
Greeley	Greeley	2,021	15	55.6		88	2†	18	21	48	1.25	− 0.47	1.03	0.3	4	24	5	2	se.	W. E. Morgan.
Guiderock	Webster	1,646	10								1.09	− 0.85	0.97	0.0	2	18	11	2	s.	J. S. Marsh.
Haigler	Dundy	3,258	15								0.00	− 0.73	0.00	0.0	0	21	8	2		Chi., Burl. & Quincy R. R.
Halsey‖	Thomas	2,695	8	56.8		94	10	12	28	54	0.35		0.35	0.0	1	22	6	3	nw.	U. S. Forest Service.
Hartington	Cedar	1,309	19	57.7	+ 6.5	92	16	24	28	50	1.64	0.00	1.48	T.	2	22	8	1	nw.	D. E. Ewing.
Harvard	Clay	1,812	21	54.0	+ 2.0	86	2	18	28	49	1.35	− 0.93	0.97	T.	3	24	4	3	se.	Dr. J. T. Fleming.
Hastings	Adams	1,932	20	56.2	+ 3.0	88	2	20	29	54	1.33	− 0.84	0.98	0.0	2	27	3	1	sw.	Chi., Burl. & Quincy R. R.
Hayes Center	Hayes		17	55.8		93	11	15	28	55	0.01	− 1.39	0.01	0.0	1	25	3	3	nw.	C. A. Ready.
Hay Springs	Sheridan	3,821	23	50.6	+ 3.2	94	10	10	28	63	0.20	− 1.05	0.20	1.0	1	22	5	4	nw.	A. Kadlecek.
Hebron	Thayer	1,458	25	57.2	+ 3.0	87	2	23	28†	43	0.66	− 1.35	0.59	T.	2					Dr. C. M. Easton.
Hemingford	Boxbutte	4,256	1								0.41		0.14	0.0	4					A. S. Enyeart.
Hendley	Furnas	2,231	6								0.12		0.12	0.0	1					T. L. Jones.
Hillside	McPherson		1	52.3		93	10	10	21	62	0.06		0.06	T.	1	25	3	3	nw.	Mrs. M. R. Lloyd.
Holdrege	Phelps	2,324	18	57.8	+ 4.9	94	10	20	29	55	1.30	− 0.35	1.30	0.0	1				s.	Chi., Burl. & Quincy R. R.
Hooper‖	Dodge	1,228	13	55.0	+ 2.9	86	16	24	29	40	0.67	− 1.67	0.51	T.	2	23	2	6	s.	Dr. W. Howard Heine.
Imperial	Chase	3,278	20	58.8[f]	+ 7.0	94	10	12	28	58[f]	T.	− 1.03	T.	0.0	0				nw.	Robt. Malcolm.
Kearney	Buffalo	2,146	20	58.3	+ 4.4	89	2†	15	28	52	0.74	− 1.10	0.73	T.	2	23	6	2	sw.	N. C. Dunlap.
Kimball	Kimball	4,697	21	52.3	+ 4.0	92	9†	13	27	55	T.	− 0.61	T.	T.	0	22	7	2	nw.	F. J. Bellows.
Kirkwood	Rock		15	57.3°	+ 7.0	97	10	16	28	58°	0.54	− 1.14	0.49	T.	2				s.	Mrs. C. Arter.
Kowanda	Deuel		2								0 06		0.06	0.0	1					Geo. W. Hulse.
Lexington	Dawson	2,385	21	57.0	+ 4.6	91	10	16	28	56	0.46	− 0.97	0.46	0.0	1	27	0	4	sw.	Robt. Chadwick.
Lincoln	Lancaster	1,189	31	58.2	+ 4.9	88	2	26	28	35	1.21	− 0.61	1.15	T.	4	22	5	4	s.	U. S. Weather Bureau.
Lodgepole	Cheyenne	3,820	12	54.8	+ 5.2	96	10	9	28	60	T.	− 0.41	T.	T.	0	22	6	3	nw.	R. T. Kidney.
Loup	Sherman	2,067	16	55.0	+ 3.6	87	3†	15	21†	52	0.85	− 1.18	0.70	0.0	2	22	6	3	s.	E. S. Hayhurst.
Loyal	Custer		2								0.36		0.36	0.0	1	26	3	2	n.	C. H. Cass.
McCook	Redwillow	2,506	15			93	10				0.17	− 0.89	0.17	0.0	1	27	4	0	s.	C. G. Coglizer.
McCool Junction	York	1,575	12								0.76	− 1.81	0.64	T.	2					L. L. Slagle.
Madison	Madison	1,585	17	55.5	+ 4.4	85	2†	22	28†	39	1.77	− 0.15	1.42	T.	2	25	1	5	sw.	Dr. F. A. Long.
Marquette	Hamilton	1,830	31								1.94	− 0.30	1.67	T.	3					John Ellis.
Mason City	Custer	2,257	9								0.00	− 1.96	0.00	0.0	0					J. A. Amsberry.
Minatare	Scottsbluff	3,825	1								0.00		0.00	0.0	0	19	2	10	nw.	Anthony Kennedy.
Minden	Kearney	2,169	33	56.6	+ 4.2	89	2	17	28	49	1.84	− 0.28	1.35	0.0	4	23	5	3	s.	Joel Hull.
Mitchell	Scottsbluff		3	51.6		93	10	6	28	59	0.31		0.18	0.0	2	25	4	2	nw.	U. S. Reclamation Service.
Morrill	do		1																	Edwin K. Wieland, jr.
Nebraska City	Otoe	941	33	57.7	+ 4.0	87	2	25	28	39	0.75	− 2.06	0.45	T.	2	24	4	3	s.	Chi., Burl. & Quincy R. R.
Norfolk	Madison	1,532	27	55.8	+ 5.1	90	15†	22	28	49	0.83	− 0.77	0.70	T.	2	28	1	2	s.	Dr. P. H. Salter.
North Loup	Valley	1,961	22	55.3	+ 3.7	90	2	17	21	54	0.73	− 0.90	0.65	T.	2	21	6	4	s.	W. G. Rood.
North Platte	Lincoln	2,841	36	55.4	+ 5.4	93	10	12	28	56	0.01	− 1.14	0.01	0.0	1	25	4	2	w.	U. S. Weather Bureau.
Oakdale	Antelope	1,722	23	53.9	+ 4.2	87	2	19	28	48	1.13	− 0.44	1.02	0.1	4	23	5	3	s.	G. S. Clingman.
Odell	Gage	1,278	16								1.05	− 1.15	0.85	0.0	2					Chi., Burl. & Quincy R. R.
Omaha	Douglas	1,103	40	58.9	+ 4.7	88	2	27	28	32	0.72	− 1.63	0.64	0.1	4	18	8	5	s.	U. S. Weather Bureau.
Ord	Valley	2,062	16								1.08	− 0.81	0.67	0.0	3	20	7	4	s.	James Milford.
Orleans	Harlan	1,993	2								0.46		0.46	0.0	1					James McGeachin.
Osceola	Polk	1,644	12	54.6[d]		88	13	22	28	46[d]	1.33	− 0.99	1.33	T.	1				s.	G. T. Ray.
Palisade	Hitchcock		1								0.00		0.00	0.0	0					E. E. Young.
Palmyra**‖	Otoe	1,142	15	57.2	+ 3.6	88	2†	26	28†		0.87	− 1.10	0.82	0.0	2	23	6	2	sw.	Thomas Coles.
Pawnee City	Pawnee	1,175		58.4		88	16	18	29	47	0.40	− 2.10	0.30	T.	2	25	3	3	s.	Frank A. Barton.
Paxton	Keith		1								0.00		0.00	0.0	0					H. D. Lute.
Plymouth	Jefferson	1,419	6	57.4		87	13	23	28	43	0.76		0.52	0.0	2	19	9	3	s.	John Ruppel.
Purdum	Blaine		10	55.2		96	10	8	28	53	0.08	− 1.44	0.06	T.	2	24	3	4	sw.	T. C. Jackson.
Ravenna	Buffalo	2,028	33	56.8	+ 4.6	90	2	15	21	50	0.72	− 1.00	0.69	T.	2	24	5	2	s.	H. G. Smith.
Redcloud	Webster	1,687	18	58.8	+ 5.0	88	2†	20	29	52	1.18	− 0.43	0.89	T.	2	26	3	2	s.	Chas. S. Ludlow.
St. Libory	Howard	1,887	15								1.12	− 1.06	0.90	0.0	2	25	4	2	s.	W. I. Meader.
St. Paul	do	1,796	16	57.1	+ 3.7	80	2	21	28	44	1.43	− 0.51	0.95	0.0	2	25	4	2	sw.	Paul Anderson.
Santee	Knox		22	58.4	+ 5.9	95	11	21	28	48	1.30	− 0.49	0.70	0.0	2	20	10	1	se.	Nat H. Neff.
Sargent	Custer	2,339	13	56.3°		90	10	16	28	61°	0.15	− 0.98	0.15	0.0	1				nw.	Jas. L. Ferguson.
Schuyler	Colfax	1,357	17	56.4		88	2†	19	25	44	1.42	− 0.70	1.28	T.	2	24	5	2	s.	John T. Sumner.
Scottsbluff	Scottsbluff	3,888	4	51.9		92	9†	12	28	58	0.17		0.12	0.0	2	24	3	4	nw.	A. B. McCoskey.
Seward	Seward	1,435	20	57.2	+ 2.5	88	1	23	28†	55	1.25	− 1.06	1.00	T.	2	24	2	5	nw.	Chi., Burl. & Quincy R. R.
Sheridan	Wheeler		2								1.06		0.57	T.	2	22	6	3	sw.	J. C. Harris.
Sidney	Cheyenne	4,090	18								0.04	− 0.81	0.03	T.	2	27	4	0	nw.	John P. Fischer.
Springview	Keyapaha		17	58.0	+ 7.3	95	10	12	28	52	0.18	− 0.96	0.18	T.	1	20	8	3	nw.	C. L. Phelps.
Stanton	Stanton	1,472	19	56.8	+ 5.2	86	17	22	28	45	0.35	− 1.33	0.35	0.0	1	25	5	1	sw.	Alfred Pont.
Stratton	Hitchcock	2,804	15								0.00	− 1.20	0.00	0.0	0					Miss Stella Vennum.
Superior	Nuckolls	1,574	25								0.80	− 1.41	0.60	0.0	2					F. V. Bishop.
Tablerock	Pawnee	1,023	22								0.70	− 1.74	0.45	T.	2	24	4	3	s.	E. D. Howe.
Tecumseh	Johnson	1,113	32								0.89	− 1.66	0.60	0.0	2	22	7	2		Chi., Burl. & Quincy R. R.
Tekamah	Burt	1,060	20	56.4	+ 3.0	88	2	21	29	40	1.09	− 0.76	1.05	0.0	2	20	8	3	s.	Dr. A. D. Nesbit.
Tobias	Saline	1,597	1					25	28		0.66		0.56	T.	2	22	5	4	s.	Frank Ainsworth.
Turlington	Otoe	1,214	18	58.2	+ 3.4	87	2	25	28†	36	0.78	− 1.48	0.56	T.	3	25	3	3	se.	Wm. N. Hunter.
University Farm‖	Lancaster		25	58.4		87	1†	25	28	37	0.91	− 1.27	0.86	T.	2	23	8	0		S. W. Perin.
Valentine	Cherry	2,613	22	53.9	+ 5.4	95	10	10	28	47	0.20	− 1.12	0.13	0.2	4	22	7	2	nw.	U. S. Weather Bureau.
Wahoo	Saunders	1,187	8								0.97		0.85	0.0	2	23	6	2	sw.	W. T. Mauck.
Wakefield	Dixon	1,387	16	54.8	+ 2.8	89	16	22	28	47	1.02	− 1.09	0.85	T.	3	25	3	3	s.	I. H. Weaver.
Walthill	Thurston		8																	H. L. Keefe.
Watertown	Buffalo	2,299	5								0.54		0.30	0.0	2	18	12	1	nw.	R. E. Swift.
Wauneta	Chase		11								0.00	− 1.02	0.90	0.0	0					C. D. Fuller.
Weepingwater	Cass	1,080	33	57.4		88	2†	26	28	47	0.89	− 1.36	0.70	0.1	4	25	2	4	s.	S. W. Orton.
Wellfleet (near)	Lincoln		1																	Mrs. Eli Votaw.
Westpoint	Cuming	1,313	24	58.2	+ 4.2	90	2	24	28	45	1.41	− 0.39	1.21	T.	2	27	2	2	s	J. C. Elliott
Wisner	do	1,380	14								1.52	− 0.96	1.25	T.	2	21	7	3		F. C. Evans.
Woodlawn	Lancaster		5								1.08		1.00	T.	2	24	3	4	s.	H. C. Kendall.
York	York	1,633	21	58.2	+ 4.1	89	16	20	28	46	0.87	− 1.26	0.72	T.	2	24	5	2	sw.	A. T. Glauque.
Iowa.																				
Afton‖	Union	1,212	16	55.5	+ 2.2	81	2	22	29	29	1.13	− 1.49	0.90	T	3	23	3	5	sw.	N. W. Rowell.
Allerton‖	Wayne	1,513	8	57.4		88	16	16	29	41	0.12		0.08	T.	2	25	0	6	sw.	Mrs. Geo. Shriver.
Alton	Sioux	1,305	5	54.1		86	2†	18	29	40	0.78		0.57	T.	5	21	5	5	sw.	W. S. Slagle.
Atlantic	Cass	1,164	19	55.8	+ 4.2	85	2	19	29	37	1.15	− 1.37	0.61	T.	4	15	8	8	sw.	Thos. H. Whitney.
Audubon‖	Audubon	1,301	16	54.8	+ 3.9	83	2	21	29	40	0.93	− 1.23	0.60	T.	3	21	3	7	sw.	Geo. E. Kellogg.
Bedford‖	Taylor		10	56.8	+ 2.5	87	2†	14	29	42	1.37	− 0.91	1.13	T.	3	23	4	4	sw.	E. E. Healy.
Centerville	Appanoose										0.15		0.10	T.	2	25	3	3	w.	Gordon Peacock, jr.
Chariton‖	Lucas	1,042	15	56.7	+ 2.5	88	2†	13	29	44	T.	− 2.36	T.	T.	0	25	0	6	se.	C. C. Burr.
Clarinda	Page	1,009	20	54.0	0.0	88	2	21	29	39	1.55	− 0.95	0.79	T.	4	23	7	1	s.	A. S. Van Sandt.
Corning‖	Adams	1,117	18	55.4	+ 2.1	88	2	18	29	34	1.71	− 0.62	0.82	T.	3	25	0	6	se.	Jerome Smith.
Corydon‖	Wayne	1,101	17	56.8	+ 2.0	86	2	18	29	33	0.14	− 2.35	0.07	T.	3	24	2	5	sw.	Clara Miller.

TABLE 1.—*Climatological data for October, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Iowa—Cont'd.																				
Council Bluffs	Pottawattamie			56.0		87	2	18	29	46	0.97		0.73	T.	3	20	4	7	sw.	B. W. Crossley.
Creston	Union	1,312	5	55.7		86	2	20	29	43	1.42		0.96	T.	4	22	2	7	s.	O. J. Colby.
Cumberland	Cass		10								1.56	− 1.05	1.18	T.	4	25	2	4	sw.	J. H. Reppert.
Denison	Crawford	1,180	16	55.1	+ 4.3	85	2†	19	29	41	1.34	− 0.69	0.60	T.	5	24	3	4	s.	W. C. Van Ness.
Elliott	Montgomery		5	57.1		87	2	21	29	40	0.83		0.75	T.	2	22	6	3	nw.	Henry Barnes.
Greenfield	Adair		18	54.6	+ 1.5	83	2	20	29	31	1.41	− 0.86	0.70	T.	3	22	6	3	sw.	R. B. Oldham.
Harlan‖	Shelby	1,192	11	54.2	+ 1.4	85	2	18	29	41	0.99	− 1.77	0.48	T.	4	18	8	5	s.	C. A. Reynolds.
Hopeville	Clarke		19	56.5	+ 2.3	86	2	18	29	38	0.37	− 1.87	0.31	T.	2	17	7	7	s.	M. T. Ashley.
Inwood‖	Lyon	1,474	6	55.6		93	10	17	29	43	1.46		1.18	0.5	4	24	3	4	s.	F. B. Hanson.
Lamoni	Decatur		3	55.6		83	2	16	29	35	0.27		0.15	T.	5	21	0	11	nw.	T. J. Fitzpatrick.
Larrabee	Cherokee	1,266	20	52.8°	+ 2.5	84	2†	17	29	35	0.79	− 1.23	0.64	0.5	4	22	9	0	.....	H. B. Strever.
Le Mars‖	Plymouth	1,224	14	54.4	+ 3.1	83	2†	23	28†	37	0.78	− 1.11	0.60	T.	4	18	7	6	s.	G. A. C. Clarke.
Lenox‖	Taylor	1,250	15	56.2	+ 2.6	83	2	19	29	33	1.35	− 1.18	1.00	T.	4	23	4	4	s.	J. L. Hurley.
Leon	Decatur	1,120	8	56.8		84	2	18	29	38	0.15		0.15	T.	1	20	4	7	s.	Morris Gardner.
Little Sioux‖	Harrison		5	57.2		87	2†	19	29	45	1.01		0.88	T.	3	24	4	3	sw.	Geo. H. Gibson.
Logan‖	do	928	43	55.8	+ 3.6	84	16	22	29	44	1.02	− 1.37	0.73	T.	5	14	14	3	nw.	Glenn H. Stern.
Massena‖	Cass		4																.....	C. E. Smeltzer.
Mount Ayr‖	Ringgold	1,236	17	57.5	+ 2.6	85	2†	23	29	35	0.59	− 1.67	0.35	T.	5	23	1	7	sw.	A. F. Beard.
Odebolt‖	Sac	1,356	13	55.8	+ 2.9	88	16	20	29	41	0.61	− 1.44	0.32	0.0	4	24	4	3	.....	E. Starner.
Onawa‖	Monona	1,051	10	57.8	+ 3.0	87	2	26	28†	42	1.08	− 1.31	0.95	T.	3	26	0	5	s.	C. G. Perkins.
Pacific Junction‖	Mills	960	11	55.1	+ 0.7	86	11	20	29	42	1.04	− 1.26	0.63	T.	3	23	7	1	s.	H. H. McCartney.
Rock Rapids‖	Lyon	1,358	11	51.8	+ 4.8	85	15	19	29	38	0.20	− 1.81	0.15	0.5	2				.....	W. C. Wyckoff.
Sheldon‖	O'Brien	1,422	10	55.2	+ 3.8	90	16	19	29	45	0.58	− 2.01	0.55	1.0	2	24	4	3	s.	Dr. A. W. Beach.
Sibley	Osceola	1,212	17	52.8	+ 3.2	88	11†	18	29	47	0.87	− 1.22	0.70	0.9	4	22	2	7	sw.	H. G. Doolittle.
Sioux Center‖	Sioux		11	53.8	+ 2.8	83	15†	22	28†	35	0.92	− 1.26	0.90	0.0	2	25	2	4	s.	J. de Ruyter.
Sioux City	Woodbury	1,135	21	56.0	+ 4.9	88	16	25	28	38	0.84	− 0.95	0.70	T.	4	21	7	3	s.	U. S. Weather Bureau.
Thurman‖	Fremont		13	56.6	+ 1.8	86	2	19	29	40	0.92	− 2.25	0.42	T.	3	20	7	4	nw.	C. R. Paul.
Washta‖	Cherokee	1,157	12	54.7	+ 5.7	89	16	15	29	49	0.90	− 1.19	0.85	T.	2	24	4	3	s.	H. L. Felter.
Woodburn‖	Clarke	961	11	54.6		87	2†	10	29	50	0.56	− 1.46	0.50	T.	3	23	2	6	sw.	C. B. McDonough.
Kansas.																				
Abilene	Dickinson	1,157	15																	T. W. Sherman.
Agricultural College	Riley	1,100	52	58.7	+ 2.4	94	1	18	29	47	0.90	− 1.41	0.65	T.	2	23	2	6	sw.	Prof. J. O. Hamilton.
Alton	Osborne	1,651	8	60.6		94	16	17	28	55	0.47	− 1.23	0.35	T.	2	23	6	2	s.	H. A. Storer.
Atchison	Atchison	973	19	60.0	+ 3.0	88	15	26	28	38	0.50	− 2.21	0.40	T.	2	24	2	5	w.	Prof. M. F. Troxell.
Baker	Brown	1,182	10	58.9		90	1	24	28	42	0.48		0.48	0.0	1	13	0	18	s.	E. A. Bastien.
Beloit	Mitchell	1,383	15																	W. H. Houghton.
Blakeman	Rawlins	2,894	13	56.0		94	10	10	28	64	0.04	− 1.21	0.04	.....	1	26	1	4	nw.	C. L. Henderson.
Blue Rapids	Marshall	1,105	4																	M. Norton.
Centralia	Nemaha	1,256	1																	L. E. Hazen.
Chapman	Dickinson	1,113	6	59.6		91	1	18	29	48	0.27		0.27	0.0	1	26	2	3	s.	Dr. R. McShea.
Clay Center	Clay	1,203	9	60.0		90	2†	20	29	49	0.36		0.18	0.0	2	24	3	4	s.	O. L. Slade.
Colby	Thomas	3,138	19	58.0	+ 4.9	92	1	12	28	51	0.03	− 1.07	0.03	0.0	1	24	6	1	s	R. M. Chelf.
Concordia	Cloud	1,398	26	59.4	+ 4.0	88	2	24	28	40	0.37	− 1.63	0.25	T.	2	16	12	3	s.	U. S. Weather Bureau.
Densmore	Norton	2,200	1	60.4		95	15	18	21	57	0.52		0.52	T.	1	19	9	3	s.	F. S. Griffith.
Dresden	Decatur	2,731	16	59.7	+ 4.9	92	15	16	28	53	0.36	− 1.04	0.20	0.0	2	24	5	2	nw.	Jacob Bock.
Ellsworth	Ellsworth	1,537	6	59.4		93	1	16	21†	54	0.33		0.17	0.0	2	22	7	2	s.	Geo. Seitz.
Enterprise	Dickinson	1,144	8	60.9		96	1	19	29	48	0.14	− 2.10	0.10	0.0	2	22	6	3	s.	H. O. Wagner.
Eskridge	Wabaunsee	1,412	4	60.6		90	1	24	28	37	1.72		1.60	T.	3	21	6	4	s.	Geo. D. West.
Farnsworth	Lane	2,850	9	60.4		93	1†	19	28	59	0.06		0.03	0.0	2	25	5	1	s.	C. M. Jennison.
Ft. Scott	Bourbon	857	35	61.2	+ 2.2	93	1	21	29	40	2.25	− 0.34	1.74	0.0	3	26	0	5	se.	E. A. Shaver.
Frankfort	Marshall	1,146	16	58.6	+ 1.0	90	2	23	28	47	0.22	− 2.32	0.22	0.0	1	23	6	2	sw.	E. C. Dunham.
Garnett	Anderson	950	4	60.8		89	1	24	29	31	0.54		0.51	0.0	2	18	9	4	s.	D. D. Judy.
Goodland	Sherman	3,687	3	58.0		91	1†	23	21	53	0.00		0.00	0.0	0	25	4	2	s.	G. C. Calvert.
Gove	Gove	2,750	21	58.5	+ 4.3	95	1	13	28	64	0.05	− 1.21	0.05	0.0	1	26	2	3	s.	Jesse Royer.
Hanover	Washington	1,225	13	59.8		89	2	26	28	41	1.18	− 1.52	1.05	0.0	2	25	2	4	s.	August Jaedicke, jr.
Harrison	Jewell	1,804	9	58.0		88	2†	19	29	52	0.55		0.38	0.0	2	25	6	0	s.	Mahlon Tegley.
Hays	Ellis	2,000	42	59.7	+ 3.5	96	1	22	28	51	0.36	− 1.20	0.29	T.	3	23	6	2	nw.	G. K. Helder.
Hill City	Graham	2,134	2	59.6		93	1	19	20	54	0.28		0.28		1	20	0	11	.....	I. R. Mort.
Horton	Brown	1,188	21	59.4	+ 2.6	86	2	25	29	37	0.70	− 1.44	0.58	T.	2	24	3	4	s.	Mrs. S. C. Belden.
Hoxie	Sheridan	2,700	12																	C. T. Dallam.
Jewell	Jewell	1,540	5	58.0		90	2†	19	21	49	0.18		0.10		2	23	6	2	s.	C. A. Shinn.
Lawrence	Douglas	997	42	59.4	+ 3.9	86	1	22	29	37	0.57	− 2.31	0.57	T.	1	21	6	4	sw.	Prof. H. P. Cady.
Lebanon	Smith	1,812	12	59.7		90	11†	28	29	50	0.72	− 0.73	0.38	T.	2	24	3	4	n.	Earl V. Bower.
Lindsborg	McPherson	1,333	4																.....	N. S. Weddle.
Mankato	Jewell	1,784	1	59.0		89	15	21	21†	50	0.17		0.13	T.	2	21	9	1	sw.	R. M. Cauthorn.
Minneapolis	Ottawa	1,259	20	60.2	+ 3.4	90	2	21	28	47	0.20	− 1.88	0.10	0.0	2	26	2	3	s.	J. L. Steele.
Moran	Allen	1,098	14	62.0	+ 1.8	90	1	23	29	43	1.27	− 1.09	1.21	0.0	2	26	4	1	sw.	C. J. Norton.
Natoma	Osborne	1,834	1								0.50		0.50	0.0	1	29	0	2	s.	C. O. Hunt.
Norton	Norton	2,284	12	59.8	+ 5.1	91	10	21	28	54	0.10	− 1.58	0.10	T.	1	23	8	0	se.	Sim Sleffel.
Oberlin	Decatur	2,539	23								T.	− 1.24	T.	0.0	0	26	4	1	sw.	I. K. Huber.
Oketo‖	Marshall	1,194	2	58.8		90	1	24	28	42	0.96		0.90	T.	2	14	14	3	s.	J. A. Church.
Olathe	Johnson	1,032	15	59.9	+ 2.1	87	3	21	29	38	0.62	− 2.03	0.48	T.	2	25	2	4	se.	Dr. S. B. S. Wilson.
Osage City	Osage	1,081	11	61.2[d]		93	1	20	29	54[d]	0.66	− 1.54	0.52	0.0	2	21	1	4	s.	W. C. White.
Ottawa	Franklin	926	16	59.4	+ 1.7	92	1	20	29	42	0.40	− 2.49	0.37	0.0	2	19	9	3	s.	Herbert F. McDougal.
Phillipsburg	Phillips	1,939	19	60.6	+ 4.8	90	2	22	21†	57	0.74	− 1.00	0.57	0.0	3	22	5	4	se.	N. E. Bailey.
Pleasanton	Linn	862	8	59.0		86	1	22	29	34	1.16		1.01	0.0	2	26	0	5	sw.	B. F. Blaker.
Russell	Russell	1,834	11	59.8	+ 4.5	94	1	21	28	53	0.27	− 1.56	0.27	0.0	1	25	3	3	s.	Robert Brebner.
Russell Springs	Logan			57.8		92	9	10	28	51	T.		T.	0.0	0	25	4	2	nw.	D. J. Hutto.
St. Francis	Cheyenne	3,288	2	58.0		93	10	15	28	62	0.01		0.01	0.0	1	23	7	1	s.	J. E. Uplinger.
Salina	Saline	1,227	26	59.4	+ 0.4	93	2	21	28	45	0.08	− 2.13	0.06	T.	3	20	9	2	s.	Prof. A. W. Jones.
Scott	Scott	2,971	4	58.2		98	8	13	28	61	0.08		0.08	T.	1	22	7	2	s.	J. P. Loughran.
Smith Center	Smith	1,800									0.31		0.31	0.0	1	27	1	3	se.	W. H. Nelson.
Topeka	Shawnee	997	24	60.0	+ 3.7	87	2	26	28	36	1.57	− 0.34	1.51	T.	2	20	7	4	s.	U. S. Weather Bureau.
Valley Falls	Jefferson	913	11	59.4	+ 3.3	87	1†	22	29	41	0.71	− 1.30	0.70	T.	2	24	3	4	se.	Miss Nettie Maxwell.
Vinland‖	Douglas	880	1	59.2		88	1	19	29	36	0.36		0.36	T.	1	20	5	6	s.	A. Schick.
Wakeeney	Trego	2,456	27	59.4	+ 4.1	92	1	20	21	51	0.41	− 0.98	0.29	0.0	3	28	0	3	sw.	A. S. Peacock.
Wallace	Wallace	3,303	40	58.2		92	1	13	28	56	0.04	− 0.90	0.04	0.0	1	11	19	1	sw.	M. T. Griggs.
Wamego‖	Pottawatomie	1,002	17								1.15	− 0.93	0.60	T.	2	20	6	5	sw.	M. L. Stone.
Missouri.																				
Amoret	Bates	850	1	59.9		90	1	23	29	38	1.11		0.96	0.0	2	22	5	4	s.	Darby Fruit Farm.
Appleton City	St. Clair	853	20	60.9	+ 1.9	93	1	19	29	40	0.90	− 1.41	0.35	0.0	6	21	9	1	n.	T. C. Brown.
Arlington	Phelps	695	20																.....	George V. Randolph.
Arthur	Vernon	767	18	60.6	+ 4.3	92	1	20	29	44	1.14	− 1.03	0.66	0.0	2	21	7	3	sw.	J. T. Armstrong.
Avalon	Livingston		25	59.6	+ 1.8	89	15†	20	29	42	0.20	− 3.35	0.20	0.0	1	25	2	4	sw.	F. G. Ashbaugh.
Bagnell	Miller	594	15																	W. S. Brockman.
Bethany	Harrison	881	20																	W. H. Skinner.
Bolivar	Polk	1,070	22	60.8	+ 2.6	93	1	17	29	48	3.05	+ 0.34	2.10	0.0	8	22	6	3	sw.	E. Waltz.

TABLE 1.—*Climatological data for October, 1910. District No. 6*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Missouri—Cont'd.																			
Boonville	Cooper	600	34	.....	.....	.....	.....	.....	.....	.....	0.62	− 2.15	0.28	0.0	5	25	0	6	se.	C. Randecker.
Brunswick‖‖	Charitan	652	32	59.0	+ 2.6	87	2†	21	29†	49	0.48	− 2.38	0.18	T.	4	23	3	5	nw.	Louis Benecke.
Clinton	Henry	800	24	60.8	.....	89	1	22	29	35	0.76	− 1.68	0 34	0.0	3	25	3	3	s.	Dr. G. W. Menees.
Columbia	Boone	784	21	58.5	+ 3.7	87	2	20	29	37	0.67	− 1.75	0.30	T.	5	24	1	6	s.	U. S. Weather Bureau.
Conception§	Nodaway	982	26	59.0	+ 3.6	87	2	25	29	35	0.56	− 1.95	0.26	T.	4	19	8	4	sw.	Fr. Adhelm Hess.
El Dorado Springs	Cedar	750	5	61.7	.....	93	1	19	29	43	1.24	.....	0.57	0.0	4	22	6	3	sw.	Samuel Graham.
Fairport	De Kalb	920	16	.....	.....	.....	.....	.....	.....	.....	0.27	− 1.95	0.16	T.	2	24	2	5	sw.	J. W. Lincoln.
Fayette§	Howard	725	27	58.7	+ 1.8	86	2	20	29	36	0.41	− 1.99	0.20	T.	3	24	2	5	.....	Prof. T. Berry Smith.
Fulton	Callaway	818	19	58.4	+ 0.8	88	3	19	29	48	1.27	− 1.21	0.65	T.	7	15[b]	10[b]	4[b]	.....	Dr. J. L. Brenneman.
Glasgow	Howard	618	33	.....	.....	.....	.....	.....	.....	.....	0.44	− 2.03	0.24	0.0	2	24	1	6	s.	J. J. Shaughnessy.
Grant City	Worth	1,130	18	57.9	.....	87	2†	19	29	39	1.52	− 1.08	1.30	T.	2	24	3	4	nw.	W. H. Campbell.
Harrisonville‖‖	Cass	912	38	58.5	+ 2.6	89	1	20	29	39	0.55	− 2.03	0.39	0.0	3	17	4	10	s.	A. J. Sharp.
Hazelhurst	Livingston	.....	17	.....	.....	.....	.....	.....	.....	.....	0.37	− 1.50	0.37	0.0	1	.....	.....	.....	.....	W. H. Baker.
Hermann	Gasconade	482	36	.....	.....	.....	.....	.....	.....	.....	3.32	+ 0.84	1.32	T.	6	15	4	12	.....	C. T. Maushund.
Houston	Texas	1,280	18	57.8	+ 0.8	90	1	16	29	42	3.83	+ 1.54	1.90	T.	4	17	10	4	s.	E. Dempsey.
Huntsville	Randolph	790	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. H. Hammitt.
Jefferson City‖‖	Cole	628	29	57.0	+ 0.3	89	1	19	29	51	1.33	− 0.85	0.60	0.0	5	25	1	5	s.	Miss Emma Swift.
Kansas City	Jackson	963	21	61.2	+ 5.4	85	2	29	28	37	0.33	− 1.88	0.23	0.0	2	22	5	4	s.	U. S. Weather Bureau.
Kidder‖‖	Caldwell	1,017	20	59.2	+ 3.3	85	2†	23	29	33	0.33	− 2.31	0.22	T.	2	25	1	5	sw.	J. F. Sharp.
Lamonte	Pettis	863	22	60.5	.....	91	1	20	29	39	0.59	− 1.58	0.28	T.	4	19	4	8	s.	J. R. Wade.
Lebanon	Laclede	1,265	22	58.8	+ 0.4	85	1	22	29	35	3.60	+ 1.01	1.94	0.0	5	22	4	5	s.	M. W. Serl.
Lexington‖‖	Lafayette	813	28	60.0	+ 2.5	87	2	24	29	43	0.33	− 2.31	0.24	0.0	3	25	0	6	s.	J. W. Keithley.
Liberty	Clay	864	22	60.1	+ 3.0	87	14	23	29	41	0.18	− 2.10	0.18	0.0	1	23[c]	1[c]	4[c]	sw[c].	W. C. Wilmott.
Lockwood	Dade	1,088	16	60.6	.....	91	1	22	29	42	1.29	− 1.70	0.51	T.	4	24	3	4	se.	C. S. Crow.
Marshall	Saline	779	20	59.4	+ 2.6	87	2	19	29	39	0.62	− 1.83	0.38	0.0	2	21[b]	3[b]	5[b]	sw[b].	Dr. W. H. Black.
Marshfield	Webster	1,492	2	60.6	.....	89	1	25	29	38	3.21	.....	1.90	0.0	5	20	7	4	s.	Dr. O. P. Keller.
Maryville‖‖	Nodaway	1,160	20	56.8	+ 3.4	86	2	22	29	40	2.21	− 0.21	1.94	0.0	4	21	1	9	s.	J. R. Brink.
Mount Vernon	Lawrence	1,480	34	61.0	+ 1.7	94	1	21	29	36	3.02	− 0.30	1.47	0.0	7	24	3	4	sw.	O. L. White.
Nevada	Vernon	860	16	.....	.....	.....	.....	.....	.....	.....	1.36	− 1.08	0.42	0.0	5	26	2	3	sw.	C. Jewell.
Oregon	Holt	1,113	55	56.2	+ 1.3	88	12	20	29	38	0.38	− 2.26	0.26	T.	3	20	6	5	sw.	Tom Curry.
Osceola	St. Clair	738	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Matthews.
Pattonsburg	Daviess	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.25	.....	0.15	0.0	2	22	2	7	sw.	Wm. Burton.
Rolla	Phelps	1,092	29	59.8	.....	88	1	20	29	34	2.35	− 0.04	1.08	T.	7	23	3	5	sw.	Prof. P. J. Wilkins.
St. Charles	St. Charles	614	32	60.8	+ 3.3	88	1	22	29	38	4.73	+ 2.31	3.61	T.	4	26	4	1	s.	L. C. Saeger.
St. Joseph	Buchanan	825	39	59.9	.....	87	2	28	29	34	0.42	− 2.17	0.26	T.	3	18	8	5	s.	U. S. Weather Bureau.
St. Louis	St. Louis	567	39	60.8	+ 2.4	86	2	28	29	30	3.98	+ 1.57	2.82	T.	8	22	5	4	s.	Do.
Sublett	Adair	1,000	30	57.9	+ 2.7	86	18	15	29	38	T.	− 2.76	T.	T.	0	21	8	2	sw.	Lewis Spriggs.
Trenton	Grundy	812	15	58.0	+ 1.9	82	2	22	29	33	0.26	− 2.02	0.18	T.	2	19	8	4	s.	W. H. Estes.
Unionville‖‖	Putnam	1,072	17	57.8	+ 2.6	86	14	18	29	34	0.34	− 1.69	0.12	T.	3	22	3	6	s.	Geo. W. Davis.
Warrensburg	Johnson	883	32	61.3	+ 3.4	89	1	24	29	39	0.46	− 2.09	0.26	T.	3	25	2	4	s.	A. F. Smithson.
Warrenton‖‖	Warren	865	20	59.2	+ 3.8	87	1†	22	29	47	3.63	+ 1.13	1.45	0.0	6	19	7	5	s.	Dr. John H. Frick.
Warsaw	Benton	700	6	60.2	.....	94	1	19	29	44	0.99	.....	0.37	0.0	5	23	5	3	sw.	Dr. J. R. Smith.
Wheatland	Hickory	920	18	.....	.....	.....	.....	.....	.....	.....	2.70	+ 0.28	1.45	0.0	4	18	9	4	s.	Mrs. S. A. Jackson.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
Estimated by observer.
Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 6, Missouri Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																															
Barnum	Powder		T.		T.													.55	.45	.45							.05						1.50
Basin	Big Horn																														
Bennett	North Platte				.09												2.00	1.63													3.72
Big Creek Station	...do																														
Burns	South Platte																														
Casper	North Platte																														
Cheyenne	South Platte														T.		.24	.76	.01	.01							.02						1.04
Chugwater	North Platte																	1.50	.64	.06							T.						2.20
Clark	Clark's Fork		.10		.02														T.	T.							.11					T.	0.23
Cody	Big Horn		T.																.20	T.							T.	T.					0.20
Crystal Lake	South Platte																																
Dome Lake	Tongue																																
Douglas	North Platte		.02														.19	.44	.09								.30					.16	1.20
Dubois	Big Horn		.04	.05									.05						.23							T.	T.						0.37
Eaton's Ranch	Tongue		1.33		.13														.20								.10						1.76
Echeta	Powder		.25		T.												.30	.35									.30					.20	1.40
Elk Mountain	North Platte		.12														.18		1.01	.25								.05					1.61
Encampment	...do		.06	T.										T.				1.03	.20	T.							T.						1.29
Ervay	...do		T.															1.10	.38	.43							.19	.26					2.36
Fort Laramie	...do																	.36	.23	T.							T.						0.59
Fox Creek Station	...do		.06		T.												.14	.34		.25								T.					0.79
Gillette	Powder				.23													.42	T.	.12							T.						0.77
Hunters' Station	...do		.09														.44	.14	.18								.24					.18	1.27
Hyattville	Big Horn																																
Jireh	Niobrara		T.		T.													.31	1.00	.22							.30						1.83
Kirtley	...do																	.17	.28								.31						0.76
Kirwin	Big Horn					.40													.60								.80	.80					2.60
Knowles	Belle Fourche		.27		.06													.10	1.30	.14							.45					.15	2.47
Lander	Big Horn		T.										T.						.17	.07							.13						0.37
Laramie	North Platte													.02	.07		.23	1.30	.13	.04													1.79
Leo	...do		.28														T.	1.32	.43	T.							T.	T.					2.03
Lolobama Ranch	Big Horn									.05											.10												0.15
Lovell	...do	.25												.02					T.								.11					.16	0.54
Lusk	Niobrara																																
Manville	...do	.16			.03													.46	1.00	.14							.30						2.09
Moorcroft	Belle Fourche																																
Moore	North Platte		.01												.01		.01	.93	.04	.05													1.05
Newcastle	S. Fork, Cheyenne			T.	T.													.08	.12									T.					0.20
Pathfinder	North Platte		.08															1.89	.60	.02							.24	.04					2.87
Phillips	...do													.10					1.50	T.						T.		T.					1.60
Powell	Big Horn		.19																								.11						0.30
Rawlins	North Platte		T.		.02												T.	.94	.12	.04							T.					T.	1.12
Riverton	Big Horn																																
Saratoga	North Platte																																
Sheridan	Tongue		.48		.05													.03	.21	.09							.52					.26	1.64
Shoshone Dam	Big Horn																																
Soldiers' Home	Powder		.31		.19													T.	.30	.20							.40					T.	1.40
South Pass City	North Platte		.01		.06									.07	T.			.06	.06	.02	T.						T.						0.28
Thermopolis	Big Horn		.69		.02	.04									.05												.30						1.10
Upton	Cheyenne				.06	.09	.16	.75	.25									.01	.07													.65	2.04
Valley	Big Horn				.13														.54								.15					.03	0.85
Verona	Tongue		.55		.03	.03													.49							.50						.47	2.07
Wiant's Ranch	North Platte		T.		.05									T.			.06	1.70	.64								.05						2.50
Wiley	Big Horn																																
Wyncote	North Platte																.46	T.									.12						0.58
Yellowstone Park	Yellowstone	.04	.22	.16	.16								.30	.13			.15	.15	.01								.11					.06	1.49
(1) Fountain Hotel	Madison				.95									.40				.10	.24								.19						1.88
(2) Grand Canyon	Yellowstone		.10		.80									.74	T.	T.	.12	.09	T.	T.				T.	T.	.10						.08	2.03
(3) Lake Hotel	...do		.35		.51									.74				.02	.01														1.63
(4) Norris	...do		T.	T.		.78							.05				T.	.15									.20				T.	T.	1.18
(5) Riverside	Madison				.20																												0.20
(6) Soda Butte	Yellowstone		.33		.37																						.14					.30	1.14
(7) Sylvan Pass	Big Horn				.72													.35														.32	1.39
(8) Thumb	Yellowstone		.29		.71	.16								.51													.15						1.82
(9) Tower Falls	...do				.60								T.																			T.	0.60
(10) Upper Gey. Basin	Madison		T.	T.	.08									T.			.25		T.								.60						0.93
Montana.																																	
Adams	Yellowstone		.10		T.																					.04							0.14
Adel	Missouri	T.		T.	.11													T.	.52	.21						.02	.30					T.	1.16
Agricultural College	Gallatin	T.	.40	.36									T.	.21					.87							.30						.51	2.74
Augusta	Sun																																
Babb	Milk	.20		.10	.05			.05										.01	.05	.05						T.	.05	.10					0.66
Bald Butte	Missouri	.05		.70	.18													.02	.21	.02						T.	.15	.30				.03	1.66
Big Timber	Yellowstone				.10														.33									.30					0.93
Big Timber Creek	...do				.73														.14							T.	T.	.50				.07	1.44
Billings	...do		.47																.19									.48				.20	1.34
Boulder Nursery	Jefferson	T.	.15	T.	.09									.10				.20	.27	.07							.10	.20				T.	1.18
Bowen	...do		.08	.34	.12												.05	.01										.10				.03	0.73
Bridger	Yellowstone																		.54	.56								.72				.20	2.02
Broadview Exp. Sta	...do		.36																.01									.37					0.74
Busby	...do		.52																.04	.12				.04				.26				.10	1.08
Busteed	...do		.12		.13															.17								.59				.10	1.11
Cabin Creek	Jefferson	T.	T.	.15									.32				T.	.12									.06						0.65
Canyon Ferry	Missouri		.18		.07													.06	.24								.36					.04	0.95
Cascade	...do	T.		T.	T.													.01	.47	.01						.12	.26						0.87
Cataract Creek	Jefferson																																
Chessman Reservoir	Missouri		.19	.15	.07									.05				.05	.63								.54					.07	1.75
Chester	...do																																
Chinook	Milk																		.05							.02	.04						0.11
Chouteau	Missouri																																
Clear Creek	Milk																																
Clemons	Missouri	.08		.15	.03													.02	.24								.23	.14					0.89
Clyde Park	Yellowstone				.45									.05					.16								.45					.20	1.31
Copper	Musselshell	T.			.50							T.					T.		.20								.24					.05	0.99
Crow Agency	Big Horn		.47																.11	.14				.08			.39					.13	1.32
Culbertson	Missouri																																
Cut Bank	Marias																		T.	.14						T.							0.14
Decker	Tongue	.50														T.											.30				T.	T.	0.80
Delpine	Musselshell																																
Denton	Missouri																																
Dillon	Jefferson		.21	T.	.27									.09		.06	.08	04	.21	.02							.09	02					1.09
Dirty Creek	Musselshell		.03		.40														.02								.39					.25	1.09
Dry Creek	Missouri																																
Dry Wolf Camp	...do			1.00															.38	.10						.25					1.00	2.73

TABLE 2.—*Daily precipitation for October, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana—Cont'd.																																	
East Gallatin River	Gallatin		.34		.33									.25					.61							.35					.49	2.37
Ekalaka	Little Missouri		.10		.05														.05	.02						.05						0.27
Elkhorn	Jefferson		.16	T.	.20	T.								.06				.11	.43						T.	.20					.01	1.17
Evans	Missouri																																
Fallon	Yellowstone		.13															T.								T.						0.13
Family	Marias	.01																.20							.06	.04						0.31
Fish Creek	Jefferson	.30			.22														.85									T.	T.		T.	1.37
Fishtail Creek	Yellowstone																																
Flathead Creek	do		.59		.60									.02					.40							.23					.71	2.64
Forsyth	do		.18																T.					.10			T.						0.28
Fort Benton	Missouri		T.																	.32							.35						0.67
Fort Shaw	Sun																																
Foster	Big Horn		.16		.29														.05	.05				.04	T.		.34					T.	0.93
Garneil	Musselshell																																
Glendive	Yellowstone																																0.00
Goldbutte	Marias	.01																.01	.24									.02					0.28
Graham	Powder	.15		.14														.01	.50	.08							.26					.03	1.17
Grayling	Madison		.30		.44																												
Great Falls	Missouri		.07		.04														1.03							.21	.31					.01	1.67
Half Moon Pass	Musselshell		.40	.01	.02														.40	.20					.01		.50	.10		.10		.20	1.94
Half Way House	Missouri		.21		.40													.02									.70					.20	1.53
Harlowton	Musselshell																										.54						0.54
Havre	Milk		T.	T.														.04	.04						T.	T.						0.08
Helena	Missouri	.15		.07	.01									T.				.23	.10				T.			.24	.03					.01	0.84
Highwood	do	.04	.06	T.	.06													T.	.85	.06						.45	.25					.07	1.84
Homepark	Jefferson		.17		.22									.07				.56									.20						1.22
Huntley	Yellowstone		.25																.35								.58					.18	1.36
Jones Canyon	Gallatin	.91		.24	.02								.19					.55								.54					.65	3.10
Jordan	Missouri	.10																	.07														0.17
Lewiston	do		.02																.43	.04						T.	.56						1.05
Livingston	Yellowstone		.14		.27														.30								.53					.21	
Lodge Pole Creek	do																																
Lonetree	Missouri																		.50							.35	.25						1.10
Lost Horse Creek	Musselshell	T.	.19	.06	.26														.19					T.	T	T.	.45		T.			.03	1.18
Malta	Milk		.10																.01							T.	.01						0.12
Meadow Creek	Madison																																
Melstone	Musselshell																																
Mildred	Yellowstone		.26															.02	T.						T.	T.	.28					T.	0.56
Miles City	do		.12																.06					T.		12	.15					.03	0.48
Moore	Missouri	T.																		.40						.50	.45					.30	1.65
Norris	Madison		.40		.04									.18				.01	.63	.20							.20					.12	1 80
Nye	Yellowstone		.12		.34									.03					.55	.60							.60	.05				.03	2.32
Olsen Creek	Jefferson	.51		.42	.25									.09					.26									.33				.08	1.94
Pipestone Pass	do	.41		.10										.25					.40	.25						.53						.15	2.09
Poplar	Missouri		T.																							T.							T.
Raymond	do			T.	T.			T.											T.							.37	T.						0.37
Red Lodge	Yellowstone		.06																1.00	.52							.68	.02				.36	2.64
Reese Creek	Gallatin																																
Renova	Jefferson		.20											.15				.15	.25	.04							.20					.03	1.02
Rimini	Missouri																																
Ryegate	Musselshell		.15		T.																					.60							0.75
Sedan	Yellowstone																																
Springbrook	do		.21		T.	T.													T.								.05						0.26
Stearns	Missouri																				.50						.75						1.25
Three Forks	Madison																																
Tokna	Yellowstone		T.																														
Townsend	Missouri																	•	.10														0.10
Trail Creek	Yellowstone		.62		.38									30				.68	.39								.43					.66	3.46
Utica	Missouri				.15														.12	.06							.90					.20	1.43
Valentine	Musselshell		.12																.26								.49						0.87
Virginia City	Jefferson & Madison		.21		.22									T.				.24	.32	T.							T.					.07	1.06
Wall Rock Mountain	Missouri				.60									T.					.07	T.							.32					.06	1.05
Warm Springs Creek	Madison		.33		.14									.07			.01		.70	.01												.13	1.39
Willow Creek	Yellowstone	.22				.42													.47								.45						1.56
Wolf Creek	Missouri		.08	.04	.05																			.27	T.								0.44
Wolf Point	do																																0.00
Woodville	Jefferson		.26	.03	T.									.50				.15	.11								.16						1.21
North Dakota.																																	
Aplin	Knife			.14	.05											T.	.80								T.	T.						0.99
Beach	Little Missouri		.05		.11														.22							.09	.05	.02					0.54
Berthold Agency	Missouri		.10		.20													T.	.13							T.	T.	.03					0.46
Bismarck	do		T.		.01									T.				.01	.73	T.				T.		T.		T.					0.75
Broncho	Knife				.15										T.				.72								.32	.25					1.44
Buford	Missouri		T.		.01																												0.01
Coal Harbor	do																																
Dickinson	Little Missouri		.15	T.	.08													T.	.10	.01						T.	.12	.03				.05	0.54
Edgely	James																		.10	.04							.01	T.					0.15
Epping	Missouri		.05		.04														.04							T.		.04					0.17
Fullerton	James																		.10								T.	T.					0.10
Haley	Grand		.11		.03													T.	.31					T.			.18	T.				.06	0.69
Hettinger	Cannon Ball		.01															.40						T.				T.				.10	0.51
Howard	Missouri		T.		.01	T.	T.																	T.		.02	T.	.17					0.20
Jamestown	James																		.04														0.04
Lamoine	Missouri																		•	.53				T.									0.53
LaMoure	James																		.45														0.45
Mc Henry	do				T.							T.													T.	.34		T.					0.34
Manfred	Sheyenne																	T.	.50	.20					.09	T.							0.79
Marmarth	Little Missouri		.18		.03													T.	.12	.06				T.		T.	.18					.07	0.64
Marstonmoor	James				T.		T.					T.							T.	.17				T.	T.	T.		T.					0.17
Medora	Little Missouri			.42	T.													T.	.30							T.	T.						0.72
Melville	James																		.23							T.		T.					0.23
Mott	Cannon Ball		.18		.10													.08						T.		.26						.32	0.94
Napoleon	Missouri				T.														.25					T.									0.25
New England	Cannon Ball		.20		.20														T.													T.	0.40
New Salem	Heart			.08	.03	T.													1.38					T.			.02	.04					1.55
Orange	Cannon Ball		T.		T.														.10								.10					.06	0.26
Palermo	Missouri																																
Schafer	Little Missouri		.04		.05														.04								T.	T.					0.13
Steele	Missouri																																
Washburn	do			T.	T.														1.41									T.					1.41
Williston	do		.03		.01	T.													T.							T.	T.	T.					0.04
Wishek	do																																
South Dakota.																																	
Aberdeen	James					T.								T.					.30	.65							.12		T.				1.07

TABLE 2.—*Daily precipitation for October, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
South Dakota—Cont'd.																															
Academy	Missouri																		.28	.08							T.	T.					0.36
Alexandria	James		.65																.35									T.					1.00
Ardmore ‖	Cheyenne																	.40		T.							.50						0.90
Armour	Missouri																																
Belle Fourche	Cheyenne		.19																.20								.18						0.63
Brookings	Big Sioux		T.	.08															.25	.07		T.				T.	T.	T	T.			.06	0.38
Camp Crook	Little Missouri																																
Canton	Big Sioux	T.		1.13																								T.					1.13
Cascade Springs	Cheyenne														.50			.98	.28								.90						2.66
Castlewood	Big Sioux			T.											T.				.19	.26	T.							T.	T.				0.45
Centerville	Missouri			1.01															.27	T.	T.						T.	.02					1.30
Chamberlain	...do														T.				.54								T.						0.54
Clark	James		.08																.42	.06	T.					T.	T.	T.				T.	1.16
Cottonwood	Missouri			T.											.20				T.								.12	T.					0.32
Crow Creek	...do														.02				54														0.56
Daviston	Grand																																
Deadwood	Cheyenne		.20		T.													.35	.55	.30							.85					.20	2.45
Deerfield	...do		T.		.02													.18	.20	.02						.10	.02						0.54
De Smet	James		T.															.80	T.								T.	T.					0.80
Dowling	Cheyenne														T.				.26	T.							T.	.10				T.	0.36
Dumont	...do		.06		.05													.06	.56	.32							.41					.06	1.52
Elk Mountain	...do		T.															.07	.19								.06					.08	0.40
Elk Point	Missouri			1.00															.10	T.								T.					1.10
Englewood	Cheyenne																	.05	.25	.30	.20						.40						1.20
Eureka	Missouri				T.															.02							.06	T.				.10	0.18
Faulkton	James				T.															.24							.02	T.					0.26
Flandreau	Big Sioux		.05	.85															.13			.05						T.					1.08
Forestburg	James		T.																.65									T.					0.65
Fort Meade	Cheyenne																	T.	.07								.20	.10				.15	0.52
Frederick ‖	James																																
Ganvalley	Missouri																		.55								T.	T.					0.55
Greenmont	Cheyenne			.18													.24			.85								.32				.35	1.94
Greenwood	Missouri		.51															.40	.13	.01							T.	.02					1.07
Hardy Ranger Station	Cheyenne																																
Harvey's Ranch	...do		T.															.20	.85								.29					T.	1.34
Hermosa	...do		.03														T.	.18									.08					.10	0.39
Highmore	Missouri				T.										T.				.20	.03							.01	T.					0.24
Hill City	Cheyenne		.02																.23								.37						0.62
Hopewell	...do														.03				.70														0.73
Howard	James		.03	T.															.69	.18							T.	T.					0.90
Howell	...do				T.								T.		T.				.25	.20							T.	.01				.01	0.47
Huron	...do												T.					.01	.40	.02						T.	T.	T.				.09	0.52
Ipswich	...do				T.														T.	.15								T.	T.				T.	0.15
Kadoka	White														.88				.12								.09		.01			T.	1.10
Kennebec	Missouri																		.50	.03							.10	T.					0.63
Kidder	James			T.																.25					T.		T.						0.25
Kimball	Missouri														T.				.59	T.						T.	T.	T.					0.59
La Delle	James																																
Lead	Cheyenne		.10		.04												.09		.62	.21							.42					T.	1.48
Lemmon	Grand	T.																T.	.25	.26	.08	T.										.18	0.51
Marion	Missouri			1.01															.23														1.24
Marston	...do																		.19														0.19
Mellette	James				T.														.26	.74					T.		T.	.02	T.					1.02
Menno	...do		.53																.37										.01				0.91
Milbank ‖	Minnesota			T.															T.	2.25	.35						T.	.02	T.					2.62
Mitchell ‖	James		.03															.34	.20														0.57
Murdo	White														.70				.25								.15						1.10
Oelrichs	Cheyenne																	.40	.30								.30	.05					1.05
Orman	...do		.15															.03	.43								.11						0.72
Ottumwa	Missouri																		.33													.07	0.40
Pierre	...do																																
Plankinton	James																	.14	.41								.05	T.					0.60
Pollock	Missouri																			.15								T.				.20	0.35
Rapid City	Cheyenne		T.														.09	.02	.03	.01							.24					.02	0.41
Redfield ‖	James																		.02	1.50												T.	1.52
Rochford	Cheyenne		T.		T.												.18	.20	T.	.18							.14					T.	0.70
Rosebud	White																		.50	T.							.06	.20					0.76
Roslyn	Big Sioux														T.				.40	.45							.04	T.				T.	0.89
Savoy	Cheyenne																																
Selby	Missouri				T.														.12							T.	.09	T.				.02	0.23
Sioux Falls	Big Sioux		.10		.30													T	.20	T.	T.	.04					T.	T.					0.64
Spearfish	Cheyenne		.20		.03												.05	.63									.43						1.34
Stephan	Missouri														T.				T	T.							.12	T.					0.12
Tama	Cheyenne		T.																.06								.05	T.				T.	0.11
Vale	...do		.08															T.	.41								.09						0.58
Vermilion	Missouri			1.36													.16		.05	T.	T								T.				1.57
Water's Ranch	Cheyenne		.32		.04													.25	.38	.03							.46					.11	1.59
Watertown	Big Sioux																		1.05									T.					1.05
Wentworth	...do		.40	.08															24														0.72
White Lake	Missouri																	.27		.82								T.					1.09
Winner	White																																
Yankton	Missouri			.87	.05													T.	.72	T.	T.							T.					1.64
Minnesota.																																	
Pipestone	Big Sioux			.53																	.15	T.	.07					T.					0.75
Colorado.																																	
Akron	Republican												T.						T.									T.					T.
Alma	South Platte																		.27														0.27
Arriba	Republican		.02	.03														.01		.03													0.09
Auldhurst	South Platte		.02												.20		.22	.20	.02	.02								T.					1.28
Boreas	...do		.05		.04										.22		.28	.25	.20	.35													1.39
Boulder	...do														.15			.57		.20	.05						.08						1.05
Burlington	Republican		.06																														0.06
Cassells	South Platte					T.									T.	.02	.31	.15	*	.30	.04						T.						0.82
Castle Rock	...do																																
Cheesman	...do		T.												T.	T.	.25		T.	1.25	T.	T.											1.50
Cheyenne Wells	Smoky Hill			T.		T.													T.														T.
Cope	Republican		.40																	.36														0.76
Corona	South Platte																																
Denver	...do		T.							T.		T.	T.				.07	.08	T.	.02							.01	.03					0.21
Edgewater	...do																																
Estes P'k. Fish H'y	...do												.02					.25		.40														0.67
Fort Collins	...do																																
Fort Morgan	...do		T.	T.														.08	T.														0.08
Frances	...do		.01			T									.15			T	T.	.67	.09							T.						0.92

TABLE 2.—*Daily precipitation for October, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado—Cont'd.																																	
Fry's Ranch	South Platte														.07		.07	.75	.08	.10													1.07
Georgetown	do		T.		.03										.13		.26	T.	.15	.14													0.71
Greeley	do														T.			1.06		T.							T.						1.06
Grover	do		T.															1.19	T.	T.													1.19
Hartsel	do				.02												.21			.03													0.26
Hawthorne	do																	.25		.94								.12					1.31
Holyoke (near)	do																																0.00
Idaho Springs	do				T.										.15		.15		•	.25	.10												0.65
Keota	do																																
Kessler	do																																
La Porte	do																	.78															0.78
Le Roy (near)	do		.06													.06		T.	.01	T.													0.13
Longmont	do																																
Long's Peak (near)	do														.10			.15			1.00												1.25
Moraine	do																																
Platte Canon	do																.19			.20	T.							T.					0.39
St. Cloud	do																.48	.22	.05							T.							0.75
Sedgwick	do																		.10														0.10
Sill Mine	do																																
Silver Lake	do		.19			10									.22		.50		1.00														2.01
Spicer (near)	North Platte																																
Sterling	South Platte																	.04	.02														0.06
Waterdale	do														T.		T.	.85		.05								.06					0.96
Westlake	do																																
Wray	Republican		.05																											•			0.05
Yuma	do		.23																T.														0.23
Nebraska.																																	
Ainsworth	Niobrara																	.15	.27	T							T.	T.					0.42
Albion	Loup		1.38																	.17								T.					1.55
Alliance	North Platte																		T.	T							.20	T.					0.20
Alma	Republican		.03	.63														.02															0.68
Anoka	Niobrara																		.35	T.								T.					0.35
Ashland	Platte			.84		T.													.04		T.							T.					0.88
Atkinson [1]	Elkhorn																		.20														0.20
Auburn [1]	Little Nemaha			.17															.31									T.					0.48
Beatrice	Blue			.64															.16														0.80
Beaver City	Republican		T.	.12																													0.12
Bellevue	Missouri			.68															.14		.01	.02						T.					0.85
Blair	do			.91		T.													.04		T.	.06						T.					1.01
Bloomfield	do		1.02																.40	T.								T.					1.42
Bridgeport	North Platte																		T.								.02						0.02
Brokenbow [1]	Loup																		.18														0.18
Burge	Niobrara																		T.					.25			T.						0.25
Callaway	Loup																																
Cambridge	Republican			.20														.06		T.													0.26
Canton (near)	North Platte																																
Columbus [1]	Loup			1.32															.23	.04													1.59
Creighton	Missouri		.80															.40	.60	.02								T.					1.82
Crete	Blue			.90																.20													1.10
Culbertson [1]	Republican																																0.00
Curtis	do																																0.00
David City	Blue			.95															.18	T.	T.							T.					1.13
Dawson	Great Nemaha																																
Elsie [1]	Republican			T.						T				T.																T.			T.
Enderslake	Loup																																
Ewing [1]	Elkhorn			.39															23														0.62
Fairbury [1]	Blue		.53															18	T.	T.													0.71
Fairmont [1]	do			.78															.07	T.	T												0.85
Fort Robinson [1]	Niobrara																		31	.20	.06								.33				0.90
Franklin	Republican		.58			T.													.54														1.12
Fremont	Platte			.80															.16			T.					T.						1.06
Fullerton	Loup			2.00	T.	T.																					T.	T.					2.00
Geneva	Blue																		.12	T.	T.							T.					0.12
Genoa	Loup			1.70															.25	T.	T							T.					1.95
Gordon	Niobrara																			T.													T.
Gosper	Republican		.10																														0.10
Gothenberg	Platte		T.																.80														0.80
Grand Island [1]	do			1.20															.25										T.				1.45
Grant	Republican																	T.	T.	.02							T.						0.02
Greeley	Loup		1.03															.13	.06									.03					1.35
Halsey	do	.35																															0.35
Hartington [1]	Missouri			1.48															.16		T.							T.					1.64
Harvard [1]	Blue			.97															.24	.14								T.					1.35
Hastings [1]	do			.98															35														1.33
Hayes Center	Republican																	.01															0.01
Hay Springs	Niobrara		T.		T.														T.	T.							.20						0.20
Hebron	Blue			.59		T.													.07									T.					0.66
Hemingford [1]	Niobrara																		.13	.14	.02							.12					0.41
Hillside	North Platte																		.06								T.	T.					0.06
Holdredge [1]	Republican			1.30																													1.30
Hooper	Elkhorn			.51															.16									T.					0.67
Imperial	Republican		T.																								T.						T.
Kearney	Platte			.73														.01									T.						0.74
Kimball [1]	South Platte																		T.	T.							T.						T.
Kirkwood	Niobrara																		.49	T.							.05	T.					0.54
Kowanda [1]	North Platte																			.06													0.06
Lexington	Platte		.46															T.															0.46
Lincoln	do		.11	1.04															.05	T.	T.	.01						T.					1.21
Lodgepole	South Platte																											T.					T.
Loup	Loup				.70														.15														0.85
Loyal	do																	.36															0.36
Mc Cook	Republican		.17																														0.17
Madison	Elkhorn			1.42															.35									T.					1.77
Marquette	Platte			1.67															.26	.01									T.				1.94
Mason City [1]	Loup																																0.00
Minden	Blue		.72	.63														.48		.01	T.												1.84
Mitchell [1]	North Platte																		.18								.13						0.31
Nebraska City	Missouri			.30															.45		T.							T.					0.75
Norfolk	Elkhorn			.70															.13								T	T.					0.83
North Loup	Loup			.65															.08	T.								T.					0.73
North Platte	Platte		T.															T.	.01														0.01
Oakdale	Elkhorn		1.02															.07	.03	T.								.01					1.13
Omaha	Missouri		.04	.60		T.													.07	T.	T.							.01					0.72
Ord	Loup			.67															.10	.31													1.08

TABLE 2.—*Daily precipitation for October, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Nebraska—Cont'd.																																	
Palisade	Republican																		.30									T.					0.00
Pawnee City	Great Nemaha			.10																													0.40
Paxton	South Platte																		.24														0.00
Plymouth ‖	Blue			.52															.06								.02	T.					0.76
Purdum	Loup																		.03	T.								T.					0.08
Ravenna	...do			.69														T.	.29	T.	T.						T.					0.72
Redcloud	Republican			.89		T.												.22		T.													1.18
Saint Libory	Loup		.90															.48	T.									T.					1.12
Saint Paul	...do		.95																.70													T.	1.43
Santee	Missouri		.60																.15														1.30
Sargent ‖	Loup																		.14			T.						T.					0.15
Schuyler	Platte			1.28															.05								.12						1.42
Scottsbluff	North Platte				T.													.25										T.					0.17
Seward ‖	Blue		1.00																.57									T.					1.25
Sheridan	Loup		.49																.01	T.								T.					1.06
Sidney	South Platte		.03										T.						.18	T.							T.	T.					0.04
Springview	Niobrara																		.35														0.18
Stanton	Elkhorn																																0.35
Stratton ‖	Republican																																0.00
Superior ‖	...do		.60																.20														0.80
Tecumseh	Great Nemaha			.60																.29													0.89
Tekamah	Missouri			1.05															.04														1.09
Tobias	Blue			.56															.10		T.							T.					0.66
Turlington	Little Nemaha			.56															.19	T	T.	.03						T.					0.78
Valentine	Niobrara														T.				.13								.02	.02				.03	0.20
Wahoo	Platte		.85																.12														0.97
Wakefield	Elkhorn			.85																	.15	.02						T.					1.02
Walthill ‖	Missouri																																
Watertown	Platte								.30									.24															0.54
Wauneta	Republican																																0.00
Weepingwater	Missouri			.70															.11	T.	.04	.04						T.					0.89
Wellfleet (near)	Republican																																
Westpoint	Elkhorn			1.21															.20									T.					1.41
Wisner	...do			1.25															.27									T.					1.52
York	Blue			.72		T.													.15	T.								T.					0.87
Iowa.																																	
Afton	Grand			.90															.12		.11							T.	T.				1.13
Allerton	Chariton			.08		T.														T.	.04	T.						T.	T.				0.12
Alton	Floyd			.57															.01	.10	.01	.09						T.					0.78
Atlantic	Nishnabotna			.46															.61		.05	.03						T.					1.15
Audubon	...do			.25																.60	.08							T.					0.93
Bedford	Missouri			1.13		T.													.14		.10	T.						T.					1.37
Centerville	Chariton			.05																	.10		T.	T.									0.15
Chariton	...do			T.		T.															T.	T.						T.					T.
Clarinda ‖	Nodaway			.51	.28															.59		.17						T.					1.55
Corning	...do			.74															.82	T.	.15							T.					1.71
Corydon	Chariton			.07		.02													T.		.05							T.	T.				0.14
Council Bluffs	Missouri			.73		T.													.16		T.	.08						T.					0.97
Creston ‖	...do			.06	.96																.30	.10						T.	T.				1.42
Cumberland	Nodaway			.18															1.18	.06	.14	T.						T.					1.56
Denison	Missouri			.30															.31	.60	.05	.08						T.					1.34
Elliott	Nishnabotna																		.75		.08							T.					0.83
Greenfield	Nodaway			.70															.56		.15	T.					T.	T.					1.41
Harlan	Nishnabotno			.39		T.													.48	T.	.07	.05					T.	T.	T.				0.99
Hopeville	Grand			.31															.06		T.	T.						T.					0.37
Inwood	Big Sioux			1.18															.10	T	.08	.10						T.					1.46
Lamoni	Grand			T.	.15														.04	.01	.06	.01						T.					0.27
Larrabee	Little Sioux		*	.64																	.05							.10					0.79
Le Mars	Floyd		.02	.60															.03	.13	T.	T.						T.					0.78
Lenox	Missouri			1.00															.15	.10	.10							T.					1.35
Leon	Grand			.15		T.														T.	T.													0.15
Little Sioux	Little Sioux			.88															.04			09						T.					1.01
Logan	Missouri			.73		T.													.13	.04	.01	.11						T.					1.02
Massena	Nodaway																																
Mount Ayr	Grand			.35		T.													.08	.02	.12							.02	T.				0.59
Odebolt	Missouri			.32															.23		.02	.04											0.61
Onawa	...do			.95															.05			.08						T.					1.08
Pacific Junction	...do			.63															.33		.08	T.						T.					1.04
Rock Rapids	Big Sioux																		T.	.15	.05											T.	0.20
Sheldon	Floyd			.55																T.	T.	.03						T.					0.58
Sibley ‖	Big Sioux		.04	.70																	.04	.09							T.				0.87
Sioux Center	Floyd			.90															.02														0.92
Sioux City	Missouri		.26	.44															.07	T.	T.	.07						T.					0.84
Thurman	...do			.42															.38		.12	T.						T.					0.92
Washta	Little Sioux			.85															T.	T.	T.	.05											0.90
Woodburn	Chariton			.50		T.													T.	.05	.01	T.						T.	T.				0.56
Kansas.																																	
Abilene ‖	Smoky Hill																		.25		T.							T.					0.90
Agricultural College	Kansas			.65															.35		T.												0.47
Alton	Solomon			.12		T.									T.				.10		T.							T.					0.50
Atchison	Missouri			.40		T.													.48														0.48
Baker ‖	...do																																
Beloit ‖	Solomon																																0.04
Blakeman	Republican		.04																														
Blue Rapids ‖	Blue																		.27														0.27
Centralia	...do																		.18														0.36
Chapman	Smoky Hill																	T.															0.03
Clay Center	Republican			.18															.12									T.					0.37
Colby	...do		.03			T.												T.	T.			T.											0.52
Concordia	...do			.25		T.												.16															0.36
Densmore	Solomon		.52																.16														0.33
Dresden ‖	Republican		T.	.20									T.						.10			T.											0.14
Ellsworth	Smoky Hill			.17		T.							T.						.10		.02							T.					1.72
Enterprise	...do			.04														.03															0.06
Eskridge	Kansas			1.60															.10		.25							T.					2.25
Farnsworth	Smoky Hill			.03																	T.												0.22
Ft. Scott ‖	Marmaton			1.74	.26	T.													.22		.03												0.54
Frankfort	Blue																																0.00
Garnett	Marias de Cygnes			.51		T.																											0.05
Goodland	Smoky Hill																		T.														1.18
Gove	Blue		.05																.13														0.55
Hanover	...do			1.05		T.													.17														0.36
Harrison	Republican			.38		T.													.29	T													
Hays ‖	Smoky Hill			.04		.03																											

TABLE 2.—*Daily precipitation for October, 1910. District No. 6*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Kansas—Cont'd.																																	
Hill City	Solomon		.25																.12		T.							T.					0.70
Horton	Kansas			.58		T																											
Hoxie	Solomon																		.10														0.18
Jewel	Republican			.08															T.									T.					0.57
Lawrence	Kansas			.57		T.													.38			T.											0.72
Lebanon	Solomon		.34																														
Lindsborg	Smoky Hill																		.13									T.					0.17
Mankato	Republican			.04										T	T.				.10														0.20
Minneapolis	Solomon			.10		T.														T.	.06												1.27
Moran	Marmaton			1.21		T.													.50														0.50
Natoma	Saline																		T.	T.	T.												0.10
Norton	Republican		.10																														T.
Oberlin	...do			T.															.06		T.							T.					0.96
Oketo	Blue			.90																	.14							T.					0.62
Olathe	Kansas			.48		T													T.	.14	T.												0.66
Osage City	Marias de Cygnes			.52		T.																											
Ottawa	...do			.37	.03																												0.40
Phillipsburg	Solomon			.57		.01												T.	.16	T.													0.74
Pleasanton	Marias de Cygnes			1.01																	.15												1.16
Russell	Smoky Hill			T.															.27		T.												0.27
Russell Springs	...do																	T.															T.
Saint Francis	Republican			.01														T.	T.														0.01
Salina	Smoky Hill		T.			.01							.01	T.	T.				.06		T.												0.08
Scott	White Woman		T.	.08														T.			T.												0.08
Smith Center	Solomon																	.31															0.31
Topeka	Kansas			1.51		T.													.06		T.							T.					1.57
Valley Falls	...do			.70																.01	T.							T.					0.71
Vinland	...do			.36		T.													T.									T					0.36
Wakeeney	Smoky Hill		.29	.07		T												.05															0.41
Wallace	...do			.04																													0.04
Wamego	Kansas			.55															.60		T.							T.					1.15
Missouri.																																	
Amoret	Osage			.96	T.	T.														T.	.15					T.	T.						1.11
Appleton City	...do			.35	.02	.04								.05							.35	.09											0.90
Arlington	Gasconade																																
Arthur	Osage			.66	T.																.48												1.14
Avalon	Grand																				.20												0.20
Bagnell	Osage																																
Bethany	Grand																																
Bolivar	Osage			.20	.10	2.10	.10													.06	.30	.15						.04					3.05
Boonville	Missouri				.28		.04														.12	.14	.04										0.62
Brunswick	Grand				.18	.03														.16	.11								T.				0.48
Clinton	Osage			.34																T.	.32	.10											0.76
Columbia	Missouri			.11		.09														.01	.16	.30					T.	T.	T.				0.67
Conception	...do			.26		T.													.12	.04	.14							T.					0.56
El Dorado Springs	Osage			.57		.06															.40	.21						T.					1.24
Fairport	Grand			.11																	.16							T.					0.27
Fayette	Missouri			.13		T.														T.	.08	.20							T.				0.41
Fulton	...do				.65	.02	.14													T.	.25	.14	.01					.06		T.			1.27
Glasgow	...do																				.24	.20					T.						0.44
Grant City	Grand			1.30		T.													T.	T	.22	T.						T.					1.52
Harrisonville	Osage				.39	T.	T.														.01	.15											0.55
Hazelhurst	Grand			.37																T.	T.												0.37
Hermann	Missouri				.72	1.32	.92														.26	.06						.04		T.			3.32
Houston	Gasconade				1.41	1.90	.35							T.														.17	T.				3.83
Huntsville	Chariton																																
Jefferson City	Missouri				.60		.21														.26	.18	T.					.08					1.33
Kansas City	...do			.23																	.10												0.33
Kidder	Grand			.22																		.11						T.					0.33
Lamonte	Missouri			.24		T.	.06														.28	.01					T.	T.					0.59
Lebanon	Osage			.80		1.94								.04							.64						.18						3.60
Lexington	Missouri				.24		.04															.05											0.33
Liberty	...do			.18		T.																											0.18
Lockwood	Osage			.39		.28							T.								.51							.11					1.29
Marshall	Missouri			.24																	.38												0.62
Marshfield	Osage			.48		1.90									.08						.70	.05											3.21
Maryville	Missouri			1.94	.07															.10		.10											2.21
Mount Vernon	Osage			.59	T.	1.47							.10							.04	.38	.16					.28						3.02
Nevada	...do			.69		.04														T.	.42	.14					.07						1.36
Oregon	Missouri			.26															.07		.05						T.						0.38
Osceola	Osage																																
Pattonsburg	Grand				.10		T.														.15							T.					0.25
Rolla	Gasconade			.63	.44	.86	.22														.03	12						.05	T.				2.35
St. Charles	Missouri				.90	3.61																.14						.08	T.				4.73
St. Joseph	...do			.26		T.													.02		.14	T.						T.					0.42
St. Louis	Mississippi			.88	.06	2.65	.18														.02	.15					.03	.01	T				3.98
Sublett	Charitan					T.																						T.					T.
Trenton	Grand			.18		T.													T		.08							T.					0.26
Unionville	Charitan				.12			10												T.		.12							T.				0.34
Warrensburg	Missouri			.15	.05	T.														T.	.26						T.					0.46
Warrenton	...do				.84	1.45	1.16														.05	.09						.04					3.63
Warsaw	Osage					.37														.13	.21	.19						.09					0.99
Wheatland	...do				.20	1.45															.95	.10											2.70

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 6, Missouri Valley.*

Date.	Wyoming.																Montana.											
	Basin.		Cheyenne.		Fort Laramie.		Lander.		Newcastle.		Pathfinder.		Sheridan.		Yellowstone Park.		Billings.		Dillon.		Havre.		Helena.		Lewiston.		Malta.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	.....	.....	78	39	80	43	77	42	81	45	76	44	80	42	68	42	88	43	77	36	67	45	65	45	75	45	71	40
2	.....	.....	62	39	69	40	61	33	61	36	73	36	62	38	46	33	61	41	65	29	60	42	52	38	67	40	67	36
3	.....	.....	67	32	73	29	68	29	72	28	66	33	69	34	52	32	71	34	62	29	68	42	58	38	.....	.....	72	31
4	.....	.....	61	45	65	36	62	40	60	38	62	43	61	40	42	30	62	40	63	27	54	38	51	38	.....	.....	64	35
5	.....	.....	58	37	66	29	61	25	60	28	60	28	62	30	48	28	67	30	63	26	65	37	59	41	.....	.....	64	28
6	.....	.....	69	34	77	25	71	29	65	32	71	33	74	29	59	33	78	32	71	30	76	42	73	41	.....	.....	73	35
7	.....	.....	78	45	90	33	78	35	82	40	75	42	79	36	64	40	81	43	74	31	63	53	68	50	76	49	69	42
8	.....	.....	80	45	85	40	78	39	84	45	79	41	79	38	71	43	87	39	80	33	87	40	82	41	80	54	85	40
9	.....	.....	85	39	90	36	78	35	85	50	79	38	86	38	73	40	91	39	81	33	88	39	84	46	79	44	90	39
10	.....	.....	83	42	90	31	80	34	88	50	83	33	87	36	75	41	87	39	82	30	68	37	70	44	80	32	81	41
11	.....	.....	75	37	85	32	72	37	89	52	83	38	74	37	67	37	71	38	76	31	61	36	56	42	55	32	68	38
12	.....	.....	75	45	84	30	74	45	90	54	72	47	62	41	57	38	67	38	70	29	58	37	54	43	74	45	58	36
13	.....	.....	68	43	78	41	67	35	80	49	68	40	64	36	48	32	71	43	74	29	60	26	62	42	67	41	59	29
14	.....	.....	67	43	73	39	66	33	78	45	65	37	72	32	59	29	72	32	73	31	71	41	63	38	69	32	71	31
15	.....	.....	74	36	80	33	67	33	70	42	72	34	74	32	66	31	78	32	76	30	77	47	65	37	70	32	78	40
16	.....	.....	74	42	82	35	69	42	74	42	71	30	72	35	65	38	80	34	78	36	72	43	60	37	75	37	75	39
17	.....	.....	49	39	60	39	56	42	65	44	71	40	58	47	56	35	71	43	76	35	68	44	61	47	60	35	68	35
18	.....	.....	45	32	48	39	49	35	50	38	44	37	51	34	46	32	49	43	74	30	46	33	48	35	47	32	60	40
19	.....	.....	32	24	42	33	39	24	40	32	41	25	41	22	38	22	49	30	70	27	51	25	47	30	59	29	47	20
20	.....	.....	40	18	49	19	43	18	49	14	38	18	55	17	52	20	56	19	68	29	61	18	52	25	68	20	63	25
21	.....	.....	53	33	59	21	58	22	48	18	49	29	60	27	57	25	64	27	70	28	63	26	61	31	73	25	65	27
22	.....	.....	66	35	72	28	63	24	50	18	60	37	67	24	55	30	70	36	74	27	69	45	63	34	63	30	72	25
23	.....	.....	59	35	61	30	63	33	58	28	60	36	56	34	53	33	65	38	75	30	58	35	55	38	76	25	64	32
24	.....	.....	63	36	69	31	67	37	62	32	62	37	63	31	56	40	68	31	74	29	60	42	64	44	59	38	67	35
25	.....	.....	69	45	71	32	71	30	50	28	65	39	73	33	59	38	76	41	75	28	57	39	63	42	67	32	65	40
26	.....	.....	53	22	45	42	62	24	46	24	65	32	45	28	43	16	39	31	58	26	40	23	42	22	34	20	45	35
27	.....	.....	30	17	37	28	35	19	32	20	52	14	35	18	38	12	41	22	60	29	40	20	38	17	37	10	43	17
28	.....	.....	56	16	59	14	50	16	38	20	52	15	55	16	54	20	54	24	52	20	62	14	50	24	64	7	64	13
29	.....	.....	67	38	75	19	68	22	45	24	66	38	76	27	56	31	70	35	65	26	64	36	66	32	69	40	68	33
30	.....	.....	65	41	71	38	63	25	56	30	60	38	67	26	57	26	68	26	66	30	53	32	62	37	60	38	53	25
31	.....	.....	62	37	68	25	62	27	54	32	55	34	48	30	45	30	48	35	64	25	50	33	49	41	67	39	50	30
Mns	.....	.....	63.3	35.8	69.5	31.9	63.8	31.1	63.3	34.8	64.4	34.4	64.7	31.9	55.6	31.6	67.7	34.8	70.5	29.3	62.5	35.8	59.5	37.4	65.6[d]	33.4[d]	65.8	32.6

Date.	Montana.				North Dakota.										South Dakota.													
	Miles City.		Poplar.		Berthold Agency.		Bismarck.		Dickinson.		Jamestown.		Williston.		Aberdeen.[ff]		Chamberlain.		Huron.		Kadoka.		Lemmon.		Pierre.		Rapid City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	80	50	82	39	.....	.....	77	38	78	41	68	35	77	36	74	38	90	52	78	41	86	47	76	45	.....	.....	84	53
2	56	52	68	47	.....	.....	70	46	63	41	74	48	58	38	92	39	91	54	94	54	77	49	62	45	.....	.....	68	45
3	72	40	71	31	72	29	69	38	66	32	72	38	70	34	72	40	75	42	68	46	72	39	67	34	.....	.....	70	41
4	62	51	64	47	65	40	59	45	61	40	58	32	62	40	79	42	82	55	82	49	71	48	60	45	.....	.....	71	46
5	66	38	62	25	64	39	62	32	63	30	49	30	61	30	64	42	66	40	64	41	66	36	62	31	.....	.....	65	40
6	78	40	76	45	73	24	72	34	70	35	64	35	73	36	68	29	.....	.....	75	34	72	38	70	40	.....	.....	72	45
7	80	48	72	45	72	45	80	46	79	43	75	46	74	44	87	35	.....	.....	85	41	84	38	80	44	.....	.....	82	54
8	83	47	82	34	78	29	73	47	77	43	70	39	77	35	80	40	.....	.....	75	48	77	43	73	47	.....	.....	76	49
9	88	52	92	43	92	47	83	53	90	42	69	43	89	49	86	44	.....	.....	77	41	97	49	83	46	.....	.....	87	46
10	85	46	85	39	93	34	91	41	90	41	72	38	90	34	90	43	90	56	89	46	95	47	87	46	.....	.....	84	52
11	75	44	71	39	78	35	73	43	71	42	70	44	63	36	89	40	93	57	91	45	94	49	86	45	.....	.....	88	53
12	70	46	59	36	67	49	74	43	66	36	61	45	56	40	86	43	86	51	85	48	89	51	73	40	.....	.....	73	46
13	68	37	57	29	59	33	56	39	58	36	66	34	52	33	75	45	82	47	71	44	60	50	59	35	.....	.....	62	41
14	74	40	70	30	80	28	74	31	76	31	72	32	76	33	72	41	75	44	72	39	70	48	73	35	.....	.....	72	46
15	78	38	76	37	78	35	79	42	77	36	75	45	74	44	86	42	82	52	83	51	80	50	78	45	.....	.....	77	52
16	75	40	82	34	82	30	84	36	78	.....	71	36	80	36	92	40	90	47	92	46	86	51	82	45	.....	.....	82	49
17	64	50	73	40	73	44	79	46	66	.....	72	45	72	39	90	58	93	50	86	57	78	51	75	52	.....	.....	70	51
18	50	42	60	38	63	37	55	37	52	37	68	38	48	37	67	55	80	45	66	41	68	38	61	36	.....	.....	55	36
19	44	32	63	28	45	31	40	26	43	28	57	30	45	17	40	38	64	36	41	36	40	32	39	32	.....	.....	36	29
20	59	24	60	12	56	6	48	20	55	7	36	20	57	14	44	22	47	30	36	26	51	20	50	16	.....	.....	49	25
21	62	34	61	32	60	21	60	25	44	22	49	16	60	25	60	18	58	18	54	23	59	22	60	22	.....	.....	58	31
22	72	34	71	24	74	20	68	27	73	21	56	22	70	22	60	21	65	28	68	29	72	32	70	29	.....	.....	69	38
23	65	43	61	37	61	31	58	35	50	33	60	36	58	34	65	28	68	32	69	32	64	33	60	36	.....	.....	60	36
24	63	40	53	46	61	34	60	35	53	35	48	27	60	40	64	33	68	34	61	33	66	31	55	34	.....	.....	64	39
25	70	42	51	41	62	33	69	34	72	31	54	30	55	35	73	33	70	38	74	35	80	36	73	37	.....	.....	76	44
26	42	32	44	33	50	30	49	30	59	30	45	29	42	31	62	38	78	40	51	38	46	34	55	34	.....	.....	49	29
27	44	30	39	24	34	25	32	27	38	23	39	28	35	16	37	28	.....	24	38	20	39	27	36	26	.....	.....	33	28
28	56	22	55	12	47	5	39	17	52	18	38	20	49	13	40	20	.....	17	40	21	46	17	48	11	.....	.....	47	21
29	73	32	69	32	74	29	71	28	.....	.....	62	24	70	30	60	20	.....	23	61	25	75	27	73	28	.....	.....	77	31
30	65	30	63	31	65	30	55	31	58	21	60	32	41	35	60	28	.....	24	63	33	70	35	56	32	.....	.....	67	41
31	50	36	43	23	47	19	42	25	50	34	44	25	42	19	48	30	.....	26	58	29	55	32	37	32	.....	.....	52	37
Mns	66.7	39.7	65.6	34.0	66.4[b]	30.8[b]	64.5	35.4	64.3[e]	32.5[e]	60.5	33.6	62.5	32.4	69.7	35.9	77.0[i]	39.3[d]	69.3	38.7	70.5	38.7	65.1	36.3	.....	.....	66.9	41.1

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 6*—Continued.

Date.	South Dakota.								Colorado.						Nebraska.							
	Sioux Falls.		Watertown.		Yankton.		Valentine, Nebr.		Denver.		Wray.		Alma.		Bridgeport.		Grand Island.		Hay Springs.		Hebron.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	84	42	79	38	77	44	84	45	83	47	89	39	86	52	75	32	78	51	73	35	84	55
2	80	56	71	42	63	56	84	49	72	44	83	52	89	64	73	50	78	54	72	40	91	61
3	76	60	69	46	67	50	71	34	74	36	83	54	74	50	72	45	82	51	74	40	91	61
4	80	38	80	35	72	43	81	46	80	45	87	42	80	46	75	35	84	51	76	40	91	61
5	80	45	80	42	83	46	70	35	83	43	92	46	84	50	83	38	86	54	82	44	91	61
6	83	42	72	38	74	38	70	35	75	40	85	42	79	36	73	33	82	46	77	40	91	61
7	83	50	81	36	73	33	74	35	84	46	92	42	81	42	82	36	84	46	82	42	91	61
8	83	53	72	38	74	38	73	35	84	47	92	42	84	40	82	36	84	46	82	42	91	61
9	83	53	78	38	73	38	74	35	85	47	92	42	84	42	82	36	84	46	82	42	91	61
10	82	45	86	47	83	43	86	46	90	50	92	42	88	46	86	40	86	46	86	42	91	61
11	80	45	87	44	91	59	91	59	91	48	93	39	86	42	86	40	86	46	86	42	91	61
12	85	43	72	41	82	54	82	56	84	48	93	42	89	42	86	40	86	46	86	42	91	61
13	75	43	71	43	74	56	82	56	85	48	93	42	89	42	86	40	86	46	86	42	91	61
14	76	43	72	43	73	47	82	56	85	48	93	42	89	42	86	40	86	46	86	42	91	61
15	80	43	82	46	82	46	82	56	85	48	93	42	89	42	86	40	86	46	86	42	91	61
16	86	57	86	52	90	63	90	63	91	54	93	42	89	42	86	40	86	46	86	42	91	61
17	85	54	85	49	89	63	89	63	91	54	93	42	89	42	86	40	86	46	86	42	91	61
18	72	50	71	46	72	47	70	43	82	48	93	42	89	42	86	40	86	46	86	42	91	61
19	80	43	80	34	83	46	73	43	84	48	93	42	89	42	86	40	86	46	86	42	91	61
20	82	37	86	36	87	47	86	42	88	48	93	42	89	42	86	40	86	46	86	42	91	61
21	68	35	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
22	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
23	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
24	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
25	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
26	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
27	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
28	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
29	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
30	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
31	68	36	68	32	68	40	68	40	88	48	93	42	89	42	86	40	86	46	86	42	91	61
Means	70.9	42.4	66.4	37.9	69.5	43.5	70.2	40.6	75.1	36.8	74.4	40.9	70.5[b]	28.9[b]	73.1	42.7	70.2	31.1	71.2	43.1	70.5	46.0

Date.	Iowa.						Kansas.								Missouri.							
	Valentine, Nebr.		Clarinda.‖		Sibley.‖		Sioux City.		Colby.		Concordia.		Salina.		Topeka.		Wakeeney.		Columbia.		Kansas City.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	84	45	78	53	77	42	76	47	82	40	83	44	84	46	82	46	84	47	84	46	84	46
2	84	49	80	52	76	43	78	51	85	43	84	46	84	46	84	46	84	46	84	46	84	46
3	71	34	70	58	70	43	70	51	78	38	78	46	84	46	84	46	84	46	84	46	84	46
4	81	46	70	53	69	43	73	51	78	38	78	46	84	46	84	46	84	46	84	46	84	46
5	64	35	68	42	69	43	73	48	78	38	78	46	84	46	84	46	84	46	84	46	84	46
6	74	32	70	35	71	33	73	48	78	38	78	46	84	46	84	46	84	46	84	46	84	46
7	86	46	61	36	74	33	73	48	78	38	78	46	84	46	84	46	84	46	84	46	84	46
8	76	46	70	41	70	44	73	49	78	38	78	46	84	46	84	46	84	46	84	46	84	46
9	78	48	74	42	70	44	73	49	78	38	78	46	84	46	84	46	84	46	84	46	84	46
10	95	43	76	44	82	43	81	52	85	40	84	46	84	46	84	46	84	46	84	46	84	46
11	89	51	84	45	84	49	87	53	89	44	88	51	84	46	84	46	84	46	84	46	84	46
12	82	54	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
13	84	41	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
14	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
15	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
16	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
17	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
18	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
19	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
20	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
21	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
22	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
23	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
24	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
25	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
26	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
27	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
28	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
29	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
30	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
31	86	46	86	46	86	48	90	54	90	44	88	51	84	46	84	46	84	46	84	46	84	46
Means	70.5	37.3	66.8	41.1	67.2	38.3	68.3	43.6	76.7	30.3	73.1	45.7	74.4	44.3	72.3	47.6	76.3	42.4	70.5	46.5	71.5	50.9

Date.	Missouri.																					
	St. Louis.		Unionville.‖																			
	Max.	Min.	Max.	Min.																		
1	86	52	82	50																		
2	84	52	84	50																		
3	72	50	72	46																		
4	72	50	72	46																		
5	72	50	72	46																		
6	72	50	72	46																		
7	72	50	72	46																		
8	72	50	72	46																		
9	72	50	72	46																		
10	72	50	72	46																		
11	72	50	72	46																		
12	72	50	72	46																		
13	72	50	72	46																		
14	72	50	72	46																		
15	72	50	72	46																		
16	72	50	72	46																		
17	72	50	72	46																		
18	72	50	72	46																		
19	72	50	72	46																		
20	72	50	72	46																		
21	72	50	72	46																		
22	72	50	72	46																		
23	72	50	72	46																		
24	72	50	72	46																		
25	72	50	72	46																		
26	72	50	72	46																		
27	72	50	72	46																		
28	72	50	72	46																		
29	72	50	72	46																		
30	72	50	72	46																		
31	72	50	72	46																		
Means	70.0	51.5	70.9	44.7																		

Climatological Data for October, 1910.
DISTRICT No. 7, LOWER MISSISSIPPI VALLEY.

ISAAC M. CLINE, District Editor.

GENERAL SUMMARY.

Warm weather prevailed generally during the first and second decades of the month, with maximum temperatures ranging from 80° to 90°, except in the Colorado and New Mexico areas. The third decade opened with a cool period which continued until the 23d, giving light frosts southward into northern Louisiana and Mississippi, and freezing temperatures in northwestern Texas. From the 24th to 26th temperature conditions were moderate, but on the 27th a decided cold wave overspread the district, giving killing frosts and freezing temperatures nearly to the Gulf coast.

Periods of precipitation were well defined, generally. In the Colorado area there was a period of general precipitation from the 14th to 20th, and light amounts occurred from the 2d to 5th and on the 26th and 27th. In the New Mexico area light scattered precipitation occurred on the 2d and 3d and 10th and 11th; from the 16th to 20th a period of general precipitation occurred, the amounts being heavy to excessive in some localities, and on the 27th there was light precipitation. Over the remainder of the district there were four well-defined periods of precipitation, as follows: 1st to 7th, 10th to 13th, 18th to 21st, 26th to 28th. To the west of the 93d meridian precipitation was generally light and it was below the normal at nearly all stations, while to the eastward heavy precipitation occurred and the amounts were generally above the normal. Weather conditions during the month were favorable for outdoor occupations, except that in the northeastern portion of the district excessive rains interfered, at times, with farming, building, and transportation interests.

TEMPERATURE.

Mean temperatures for the month were from 0.8° to 4.3° above the normal, except over north-central and southwestern Oklahoma and southwestern Arkansas, where there was a deficiency ranging from 0.1° to 0.4°. The maximum temperature reached, or exceeded, 90° in all States or areas and 95°, or higher, were recorded in many localities. The highest temperatures were experienced in Oklahoma, Arkansas, and in the Kansas and Texas areas, where they were above 96° at many stations during the first decade of the month. The highest temperature recorded was 100° at Sheridan Lake, Colo., Enid and Erick, Okla., and at Liberty Hill, La. Minimum temperatures for the month were generally below freezing, except on the immediate Gulf coast, where they were near 40°. In the mountainous portions of the Colorado and New Mexico areas the lowest temperatures were zero, or slightly below, and temperatures below 20° occurred quite generally in Oklahoma, Arkansas, and in the Missouri and Kansas areas. The lowest temperature recorded was −4°, at Lake Moraine, Colo., and a minimum temperature of zero was recorded at Elizabethtown, N. Mex. Freezing temperatures occurred nearly to the Gulf coast in Louisiana near the close of the month, and in many portions of the district the minimum temperatures recorded during this cold wave were the lowest of record for the month of October.

Monthly mean temperatures and departures from the normal for the various States and parts of States are reported as follows: Colorado area, 50.8°, +2.5°; New Mexico area, 54.1°, +1.3°; Texas area, 61.9°, +1.7°; Kansas area, 60.0°, +2.4°; Oklahoma, 62.9°, +1.3°; Missouri area, 60.2°, +1.9°; Tennessee area, 62.0°, +2.1°; Arkansas, 62.9°, +0.7°; Mississippi area, 65.6°, +2.0°; Louisiana, 69.1°, +1.8°.

PRECIPITATION BY DRAINAGE AREAS.

Arkansas River and tributaries.—Very little precipitation occurred over this drainage area, except in Arkansas and northeastern Oklahoma, where the amounts were generally excessive. The amounts of precipitation and the departures from the normal for the several portions of this area differ materially. Over the headwaters of the Arkansas River in Colorado the average from 31 stations was 0.89 inch, being about 0.4 inch below the normal. The precipitation was somewhat heavier over those portions of the Arkansas Valley proper that lie in Kansas and Oklahoma, where the amounts from 39 stations averaged 1.10 inch, being about 1.4 inch below the normal. The average from 18 stations in the Cimarron Valley was 0.63 inch and the deficiency was 1.4 inch. The precipitation from 57 stations in the Canadian Valley averaged 0.83 inch, which is about half the normal amount. Over that part of the valley which lies in Oklahoma the deficiency averaged about 1.4 inch. The precipitation was uniformly light over the Verdigris Valley, where the amounts from 10 stations averaged 0.96 inch and the deficiency was about 1.8 inch. The amounts from 18 stations in the Neosho Valley averaged 1.64 inch, being about 0.9 inch below the normal. Heavy precipitation occurred generally over that portion of the Arkansas Valley below the Oklahoma-Arkansas line, there being more than 6 inches at 4 stations and 1 station reported more than 11 inches. The average for 13 stations was 5.25 inches, being about 2.4 inches above the normal.

Red River and tributaries.—Over the portions of this drainage area that lie in New Mexico, Texas, and Oklahoma the precipitation was generally light and unevenly distributed, the average from 39 stations being 0.98 inch, about 1.5 inch below the normal. Below the Texas–Arkansas line the precipitation was heavier, but evenly distributed, one station reporting less than 1 inch and two stations more than 5 inches. The average from 16 stations was 2.73 inches, being 0.2 inch above the normal.

Mississippi south of St. Louis and small tributaries.—More than the normal precipitation occurred over this drainage area, except in southeastern Arkansas and at a few stations in Louisiana. However, the amounts and departures from the normal for the several valleys differ materially. In the immediate Mississippi Valley the amounts from 45 stations averaged 6.18 inches, being about 3.9 inches above the normal. More than 10 inches occurred at 7 stations and 1 station reported more than 16 inches. Over the Valley of the Meramec the precipitation averaged about 1 inch above the normal. Heavy precipitation occurred generally over the Valley of the White, six stations reporting more than 7 inches, and one station more than 10 inches. The average from 21 stations was 5.66 inches, being about 3.2 inches above the normal. Uniformly heavy precipitation occurred throughout the Yazoo Valley, the average from 31 stations being 4.40 inches, about 2.8 inches above the normal. Over the Valley of the Big Black the precipitation averaged 4.14 inches, being about 1.7 inch above the normal. The precipitation was unevenly distributed over the Ouachita Valley, the amounts ranging from less than 1 inch to more than 6 inches. The average from 19 stations was 2.91 inches, being 0.2 inch below normal.

Louisiana coastal plain.—Heavy precipitation occurred over this area, except that in scattered localities the amounts were below the normal. The average from 29 stations was 3.23 inches, being about 0.8 inch above the normal.

Monthly precipitation and departures from the normal for the various States and parts of States are reported as follows: Colorado area, 0.86, −0.45; New Mexico area, 0.65, −0.40; Texas area, 0.79, −1.50; Kansas area, 0.68, −1.64; Oklahoma, 1.33, −1.24; Missouri area, 5.22, +2.81; Tennessee area, 7.30, +4.78; Arkansas, 5.19, +2.23; Mississippi area, 4.14, +1.92; Louisiana, 3.14, +0.43.

SNOWFALL.

General snows occurred over the mountainous portions of the Colorado and New Mexico areas. The amounts ranged from 1 to 20 inches at ordinary elevations, while on the higher peaks and passes from 3 to 4 feet occurred. The snow, however, melted rapidly and at the close of the month it remained only on the more elevated peaks. A light amount of snow occurred near the close of the month in the Missouri and Tennessee areas. The average snowfall (in inches) for the various States and areas, derived from the records of such stations as reported snow, is as follows: Colorado area (25 stations), 7.2; New Mexico area (28 stations), 1.7; Texas area (9 stations), 0.8; Kansas area (16 stations), 0.2; Oklahoma (9 stations), 0.1; Missouri area (8 stations), trace; Tennessee area (11 stations), trace; Arkansas (2 stations), trace; Mississippi area (1 station), trace.

RIVERS.

In Oklahoma all streams were low during the month.

Low water continued in the Red River and changes were unusually slight, except for a small rise at Fulton during the second decade.

No material changes occurred in the upper Arkansas and tributaries. In Kansas, the channel of the Arkansas above the mouth of the Little Arkansas was dry from the 8th to the close of the month. Notwithstanding the heavy rains in Arkansas, the Arkansas River in that State was not navigable during the greater part of the month, and on the 31st the zero was reached at Little Rock, being the lowest recorded in 31 years.

Heavy rains in the White River Valley caused a rise of 8 to 16 feet in the upper White between the 3d and 8th, and 17.6 feet in the lower White between the 3d and 18th, but low stages prevailed at the close of the month.

Only slight changes occurred in the Ouachita, the extreme range for the month at Camden being 2 feet.

Below St. Louis the Mississippi was rising during the first half of the month at Memphis. The crest of the rise passed Memphis on the 13th, stage 20.5; Helena, on the 15th, stage 24.9; Arkansas City, on the 16th, stage 27.8; Vicksburg, on the 19th, stage 23.9; and Natchez, Baton Rouge, and New Orleans, on the 21st, with stages 23.5, 15.0, and 7.3, respectively. A steady fall was in progress at the close of the month.

NOTES.

Colorado (F. H. Brandenburg, Section Director).—Over the greater portion of the area embraced in District No. 7, in Colorado, the month was notably warm and dry, especially at stations located in the plains region. In some localities temperatures were as high as, or higher than, any previously recorded for the month of October and the precipitation was considerably less than usual at stations from Pueblo eastward to the Colorado-Kansas line.

Texas (B. Bunnemeyer, Section Director).—Light snow occurred in the Panhandle on the 20th, the greatest amount being 2.5 inches at Texline.

Kansas (T. B. Jennings, Section Director).—Killing frost, the first of the season, occurred on the 6th in the Arkansas Valley eastward to Garden City and in the remainder of the Arkansas Valley proper on the 21st; in the Cottonwood, Neosho, and Verdigris Valleys on the 22d, except in the border counties in the Verdigris and Neosho valleys, where it occurred on the 28th. The mild dry weather was beneficial to securing late crops, but rain is needed for wheat, pasture, and for water for stock.

Oklahoma (J. P. Slaughter, Section Director).—Clear, dry, and pleasant weather prevailed most of the month. The rainfall was exceptionally light, only a little more than 50 per cent of the normal. With two exceptions, this has been the driest October of which there is record.

Weather conditions were favorable for the maturing and picking of cotton, but generally unfavorable for winter wheat, a large acreage of which was sown on comparatively dry soil and has not had sufficient moisture to sprout the seed. Winter pasturage promises to be short, especially in the northwestern counties.

Missouri (George Reeder, Section Director).—Heavy rains occurred from the 3d to 6th. In the southeastern counties the greatest amount in 24 hours was more than 5 inches and almost 10 inches occurred in less than 48 hours. Large areas were flooded and some localities were overflowed that were never known previously to be in such condition. Bridges on the smaller streams and crops in the bottoms were damaged to some extent. Trains were delayed from 6 to 15 hours, or more.

Arkansas (H. F. Alciatore, Section Director).—Killing frost, or freezing temperatures, occurred at scattered places on the 22d and were quite general over the State on the 28th and 29th. Temperatures of freezing, or lower, were recorded in many counties on the 30th. The first killing frost occurred from 3 to 17 days earlier than usual.

Mississippi (J. H. Scott, Section Director).—Heavy frost formed over the northern half of the State on the 22d; on the 29th and 30th killing frost occurred nearly, or quite, to the coast, thin ice being observed at Biloxi, and temperatures of 25° to 28° being recorded at nearly all interior stations.

Work was begun on a drainage canal to be constructed by the city of Greenwood, Miss., and intended primarily for city drainage. About 1,500 acres of land in Leflore County, adjacent to the city, will be benefited by it, 800 acres of which will be reclaimed from a swampy condition and will become fine farming land. One of the owners of this land will bear $2,500 of the expense; the remainder will be borne by the city. The contract price for digging the canal is $12,500, with an additional $8,000 for concrete lining. A pumping station will be maintained to empty the canal during high stages of the river.

Louisiana.—Light frost occurred nearly to the Gulf coast and heavy to killing frosts, with freezing temperatures, were reported from the central and northern portions of the State on a few dates near the close of the month.

TABLE 1.—*Climatological data for October, 1910. District No. 7, Lower Mississippi Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days		
Colorado.																				
Blaine	Baca	3,935	18	58.8	+ 3.8	93	8	15	28	52	0.00	− 0.75	0.00	0.0	0	20	7	4	w.	M. M. Myers.
Buena Vista	Chaffee	7,955	10	44.0	.....	79	10	15	21†	49	0.11	.....	0.08	T.	3	.....	.....	.....	w.	C. A. Short.
Calhan	El Paso	6,700	3	50.8	.....	80	9†	10	28	44a	0.04	.....	0.03	T.	2	23	6	2	se.	H. B. Rice.
Canon City	Fremont	5,329	22	54.6	+ 1.2	89	9	21	28†	55	0.28	− 0.53	0.11	1.5	3	25	4	2	n.	G. C. Sherwood.
Colorado Springs	El Paso	6,098	30	50.8	+ 2.4	80	1†	14	28	44	0.12	− 0.55	0.06	T.	2	27	1	3	.....	Colorado College.
Cripple Creek	Teller	9,396	9	.....	.....	.....	.....	.....	.....	.....	1.59	− 0.70	0.90	9.0	4	.....	.....	.....	.....	F. G. Willis.
Cuchara Camps	Huerfano	8,200	.....	.....	.....	.....	.....	.....	.....	.....	3.62	.....	1.65	19.0	7	25	3	3	sw.	Geo. A. Mayes.
Eads	Kiowa	4,209	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. H. Lauck.
Fairview	Custer	9,500	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Elizabeth L. Gray.
Florence	Fremont	5,185	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. G. Fish.
Fremont	El Paso	8,850	....	44.0	.....	72	9	5	20	39	0.86	.....	0.31	2.4	6	22	5	4	w.	U. S. Forest Service.
Garfield	Chaffee	9,510	.....	.....	.....	.....	.....	.....	.....	.....	2.02	.....	0.81	20.0	6	23	5	3	.....	Lloyd N. Felton.
Glen Eyrie	El Paso	6,500	18	51.1	+ 2.9	85	4†	10	28	57	0.00	− 0.90	0.00	0.0	0	22	7	2	.....	Calixto Bertolotti.
Hamps	Elbert	5,400	17	50.8	+ 3.7	83	9†	6	28	50	T.	− 0.61	T.	T.	0	25	2	4	s.	W. Hamp.
Hermit Lake	Custer	10,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John E. Graham.
Hoehne (near)	Las Animas	5,700	18	55.8	+ 4.1	98	16	21	20	56a	0.66	− 0.34	0.21	T.	4	.....	.....	.....	sw.	S. W. DeBusk.
Holly	Prowers	3,380	15	57.6	+ 1.2	95	8	12	28	62	0.00	− 0.60	0.00	0.0	0	28	3	0	se.	Holly Sugar Co.
Lake Moraine	El Paso	10,265	16	40.6	+ 3.3	71	10	− 4	20	40	1.62	− 0.13	0.40	10.8	7	14	13	4	sw.	Clyde C. Mc Reynolds.
Lamar	Prowers	3,592	20	60.0	+ 4.8	95	3	15	28	57	0.00	− 1.01	0.00	0.0	0	26	3	2	.....	J. T. Lawless.
Las Animas	Bent	3,899	42	56.7	+ 3.7	93	1	14	28	58	0.42	− 0.31	0.42	0.0	1	20	5	6	se.	F. M. Tague.
La Veta Pass	Costilla	9,000	.....	.....	.....	.....	.....	.....	.....	.....	2.57	.....	2.23	24.5	3	21	6	4	e.	Norman R. Lively.
Leadville	Lake	10,248	14	38.8	+ 1.7	74	8	4	20	42	0.98	+ 0.10	0.59	4.3	7	20	7	4	n.	U. S. Weather Bureau.
Limon (near)	Elbert	5,360	3	53.3	.....	87	10	6	28	52	T.	.....	T.	0.0	0	.....	.....	.....	.....	John Lesher.
Madrid	Las Animas	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.06	.....	0.55	2.5	3	.....	.....	.....	.....	Thos. Sawyers.
Marshall Pass	Saguache	10,846	7	.....	.....	.....	.....	.....	.....	.....	0.36	.....	0.14	8.5	3	20	8	3	w.	W. D. Lillard.
North Lake	Las Animas	8,700	.....	.....	.....	.....	.....	.....	.....	.....	1.52	.....	0.55	14.5	5	24	4	3	nw.	James W. Ingmire.
Pueblo	Pueblo	4,734	22	54.6	+ 2.3	88	7	18	28	56	0.06	− 0.65	0.03	0.9	2	21	8	2	nw.	U. S. Weather Bureau.
Rocky Ford (near)	Otero	4,177	21	56.4	+ 3.6	90	1†	13	28	30	T.	− 0.90	T.	T.	0	25	2	4	w.	P. K. Blinn.
St. Elmo	Chaffee	9,500	.....	.....	.....	.....	.....	.....	.....	.....	1.51	.....	0.53	6.5	7	19	6	6	sw.	Daniel Clark.
Salida	do	7,035	12	46.4	− 0.7	84	9	13	28	60	0.90	− 0.21	0.60	4.0	2	26	3	2	w.	M. D. L. Buell.
Sheridan Lake	Kiowa	4,065	9	57.4	.....	100	10	11	28	63	0.00	.....	0.00	0.0	0	31	0	0	sw.	Howard Gamble.
Stonewall	Las Animas	8,000	4	.....	.....	.....	.....	.....	.....	.....	1.33	.....	0.58	7.0	4	21	8	2	.....	J. W. Shouse.
Trinidad	do	5,994	14	.....	.....	.....	.....	.....	.....	.....	1.41	+ 0.28	0.45	3.5	4	.....	.....	.....	.....	Mrs. Mattie Butler.
Victor (near)	Teller	10,100	6	47.2	.....	77	9	13	20	32	1.13	.....	0.61	7.0	2	24	5	2	e.	Fred Jones.
Vilas	Baca	3,935	19	.....	.....	.....	.....	.....	.....	.....	T.	− 0.77	T.	0.0	0	11	18	2	nw.	Carrie Konkel.
Westcliffe	Custer	7,864	16	45.7	+ 2.0	82	9	1	21	59	1.13	− 0.12	0.78	6.0	3	13	6	6	nw.	Zack Jordan.
Winfield	Chaffee	9,765	.....	.....	.....	.....	.....	.....	.....	.....	1.45	.....	0.83	4.0	8	.....	.....	.....	sw.	John G. Payne.
Wortman	Lake	11,250	9	.....	.....	.....	.....	.....	.....	.....	0.86	.....	0.35	9.0	3	4	26	1	nw.	Geo. C. Wortman.
New Mexico.																				
Abbott	Mora	5,771	1	.....	.....	84	4†	20	29	...	0.69	.....	0.56	0.3	3	26	2	3	s.	El Paso & Southwest. R. R.
Albert	Union	4,700	19	59.2	+ 1.2	90	4†	29	21	45	0.86	− 0.08	0.75	0.0	2	22	6	3	w.	Andrew Knell.
Arch (near)	Roosevelt	4,634	1	50.7	.....	85	1	15	28	46a	0.68	.....	0.48	0.0	2	25	0	6	s.	Wm. A. Elliott.
Aurora	Colfax	8,849	1	.....	.....	.....	.....	.....	.....	.....	1.06	.....	0.50	6.0	6	8	21	2	nw.	Miss Juanita Lucero.
Bell Ranch	San Miguel	4,500	11	57.6	.....	90	4	23	21	54	0.44	− 0.34	0.35	0.0	3	25	3	3	s.	C. M. O'Donel.
Black Lake	Colfax	8,348	1	.....	.....	.....	.....	.....	.....	.....	0.78	.....	0.40	0.0	4	17	10	4	w.	Ralph T. Martinez.
Cabeza	San Miguel	5,406	1	.....	.....	.....	.....	.....	.....	.....	0.20	.....	0.10	T.	2	20	9	2	se.	El Paso & Southwest. R. R.
Campana	do	4,493	1	.....	.....	.....	.....	.....	.....	.....	0.18	.....	0.15	T.	2	20	3	8	w.	Do.
Chacon	Mora	9,000	1	.....	.....	.....	.....	.....	.....	.....	0.89	.....	0.89	4.5	2	9	19	3	w.	Alfredo Lucero.
Cimarron (near)	Colfax	6,385	6	51.8	.....	84	7†	20	21	55	1.66	.....	1.37	0.8	3	17	8	6	s.	Wm. French.
Clayton	Union	5,178	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. W. W. Chilton.
Clovis	Curry	4,129	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. Mendenhall.
Cuervo	Guadaloupe	4,849	1	60.2	.....	87	1	26	28	44	0.37	.....	0.30	0.0	3	25	0	6	s.	El Paso & Southwestern R.
Dawson	Colfax	6,396	1	.....	.....	.....	.....	.....	.....	.....	0.93	.....	0.68	8.0	2	14	14	3	.....	Do.
Dorsey (near)	do	6,000	7	52.2	.....	85	7	20	21	50	0.43	.....	0.25	0.0	2	22	6	3	sw.	Geo. T. Lambert.
Elizabethtown	do	8,465	4	41.2	.....	79	9	0	21	59	1.03	.....	0.55	8.0	3	22	8	1	nw.	Miss Mabel Carrington.
Folsom	Union	6,399	10	52.0	+ 2.4	87	7	18	21	48	0.63	− 0.46	0.27	4.8	4	26	2	3	sw.	David Rope.
Fort Union	Mora	6,835	50	49.7	− 0.9	81	7	18	29	52	0.47	− 0.59	0.20	T.	3	26	0	5	nw.	M. C. Needham.
Hayden	Union	4,444	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. L. Cook.
Johnsons Park	Colfax	6,722	1	.....	.....	.....	.....	.....	.....	.....	0.40	.....	0.40	T.	1	17	11	3	sw.	A. J. Meloche, jr.
Kappus	Quay	4,000	.....	.....	.....	.....	.....	.....	.....	.....	0.04	.....	0.04	1.0	1	.....	.....	.....	.....	Anthony Kappus.
Lake Alice	do	7,160	1	.....	.....	.....	.....	.....	.....	.....	1.01	.....	0.41	3.0	3	.....	.....	.....	.....	Raton Water Co.
Logan	Quay	3,851	4	60.8e	.....	91	1	22	21	52e	0.24	.....	0.16	T.	2	25	3	3	sw.	John B. Reneau.
Los Alamos	San Miguel	6,789	5	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.72	1.0	3	.....	.....	.....	.....	Wm. Frank, sr.
Lvkins (near)	Roosevelt	5,000	.....	.....	.....	.....	.....	.....	.....	.....	0.73	.....	0.48	0.8	3	23	7	1	sw.	J. G. Buchanan.
Maxwell (near)	Colfax	5,894	3	.....	.....	.....	.....	.....	.....	.....	0.74	.....	0.60	.....	2	.....	.....	.....	.....	D. N. Jackson.
Melrose	Curry	4,400	2	.....	.....	.....	.....	.....	.....	.....	0.64	.....	0.42	T.	3	.....	.....	.....	.....	Dr. B. M. Porter.
Miami Ranch	Colfax	6,000	2	51.8	.....	85	7	14	20	51	1.47	.....	1.03	1.5	3	27	2	2	sw.	Farmers' Devel. Co.
Montoya	Quay	4,335	1	.....	.....	.....	.....	.....	.....	.....	0.54	.....	0.41	0.0	2	2	25	4	w.	El Paso & Southwest. R. R.
Mount Dora (near)	Union	5,600	.....	.....	.....	84	8†	30	21†	.....	0.13	.....	0.10	1.0	2	24	4	3	sw.	Edward F. Grygla.
Nara Visa	Quay	4,225	4	60.1	.....	90	1	25	21	52	0.13	.....	0.08	1.0	3	23	2	6	s.	Willard Belknap
Optimo (near)	Mora	6,400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	R. K. Odell.
Pasamonte	Union	.....	.....	.....	.....	.....	.....	.....	.....	.....	T.	.....	T.	T.	0	27	3	1	w.	J. J. Heringa.
Raton	Colfax	6,660	12	53.1	+ 2.0	86	7†	18	21	49	0.46	− 0.22	0.42	0.0	2	28	1	2	w.	Prof. R. C. Crum.
Rociada	San Miguel	8,200	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jose A. Baca.
Rosebud	Union	4,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. T. Nix.
Roy	Mora	5,884	1	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.70	0.2	2	3	26	2	sw.	El Paso & Southwest R. R.
San Jon	Quay	4,200	3	59.6	.....	90	1†	26	22†	45	0.23	.....	0.10	T.	3	25	2	4	sw.	Jesse T. White.
Solano (1)	Mora	5,622	1	55.2	.....	85	4†	21	20	43	0.91	.....	0.71	0.2	3	23	5	3	sw.	F. M. Hughes.
Springer	Colfax	5,857	14	53.0	+ 2.0	33	7	23	6†	55	0.20	− 0.63	0.10	3.0	3	30	1	0	w.	Atchison, Topeka & S. F. R.
Taylor	do	5,661	.....	.....	.....	.....	.....	.....	.....	.....	1.35	.....	0.50	0.5	4	11	20	0	s.	El Paso & Southwest. R. R.
Trementina	San Miguel	5,000	2	.....	.....	.....	.....	.....	.....	.....	0.95	.....	0.75	0.0	3	19	5	7	s.	Miss Alice Blake.
Tucumcari (1)	Quay	4,194	5	60.8	.....	89	1†	29	20†	43	0.45	.....	0.37	2.0	3	26	4	1	sw.	John F. Seaman.
Valley	Union	5,000	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. M. Letitia Payne.
Vermejo Park	Colfax	7,600	5	49.9	.....	78	8†	22	22	46	0.08	.....	0.08	1.0	1	13	8	10	e.	H. W. Adams.
Wagon Mound (near)	Mora	6,300	1	49.6	.....	83	7	18	29	55	1.27	.....	0.98	1.0	3	25	3	3	sw.	Guy L. Barnes.
Texas.																				
Amarillo	Potter	3,676	18	60.4	+ 4.3	94	4	28	28	45	0.26	− 1.45	0.24	1.6	3	23	7	1	s.	U. S. Weather Bureau.
Archer City	Archer	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.92	.....	0.73	0.0	4	25	3	3	n.	Chas. H. Thuman.
Arthur City	Lamar	590	18	.....	.....	.....	.....	.....	.....	.....	0.40	.....	0.40	0.0	1	24	0	7	.....	J. B. Wheeler.
Bonham	Fannin	566	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	B. S. Lovelace.
Canadian	Hemphill	2,339	3	62.8	.....	93	1	26	28	49a	1.79	.....	1.30	1.0	4	24	4	3	s.	Canadian Academy.
Childress	Childress	1,869	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Davis.
Chillicothe	Hardeman	1,406	2	.....	.....	.....	.....	.....	.....	.....	1.30	.....	0.80	0.0	2	.....	.....	.....	.....	A. B. Connor.
Clarendon	Donley	2,719	5	63.2	.....	94	1	24	28	50	0.41	.....	0.19	T.	3	26	2	3	se.	J. B. McClelland.
Clarksville	Red River	442	18	64.6l	.....	94	13	26	29	49l	0.60	− 2.57	0.41	0.0	2	15l	11	3l	.....	J. W. O'Neill.
Claude	Armstrong	3,397	5	.....	.....	.....	.....	.....	.....	.....	0.02	.....	0.02	T.	1	.....	.....	.....	.....	Ft. Worth & Denver Cy. Ry.
Dalhart	Dallam	3,998	5	56.4	.....	91	1	18	28	54	0.00	.....	0.00	0.0	0	27	2	2	sw.	F. L. Kennard.

TABLE 1.—*Climatological data for October, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Cont'd.																				
Denison	Grayson		2								0.84		0.72	0.0	3	16	9	6	n.	J. B. Gibson.
Finley	Bowie										1.30		0.50	0.0	4	21	3	7	n.	Mrs. M. C. Myers.
Henrietta	Clay	915	18	64.9	− 0.4	98	1	32	29	50a	1.54	− 0.56	1.35	0.0	2	18	5	8	s.	C. K. Brown.
Hereford	Deaf Smith	3,750	5																	A. C. Elliott.
Lewis Ferry	Bowie		1								1.50		1.50	0.0	1	19	6	6		P. G. Ruff.
Memphis	Hall	2,067	5	61.2		96	1	28	28†	40	0.66		0.41	0.0	2	23	3	5		Ft. Worth & Denver City Ry.
Miami	Roberts	2,743	4	61.8		95	1	25	28	45	2.12		1.98	T.	3	23	4	4	s.	J. E. Kinney.
Mobeetie	Wheeler		16																	R. A. Choate.
Nazareth	Castro		4			94	1				0.33		0.21	T.	2	28	0	3	sw.	Rev. P. A. Kaelin.
Ochiltree	Ochiltree		2																	S. J. Allen.
Pampa	Gray	3,226	1	61.4		95	13	20	28	54	0.90		0.75	0.0	2					B. E. Finley.
Paris	Lamar	892	21	66.8	+ 1.2	96	1†	26	29	44	0.67	− 1.65	0.38	0.0	7	16	5	10	s.	Robert A. Miller.
Plemons	Hutchinson		3	59.9		95	1†	16	28	53	0.03		0.03	0.0	1	26	1	4	se.	C. S. Solomon.
Quanah	Hardeman	1,563	5	63.6		96	1	29	28	37	0.35		0.35	0.0	1	23	2	6	s.	Wm. H. Crawford.
Ringo Crossing	Hopkins										1.14		0.70	0.0	3	20	0	11	sw.	H. J. Palmer.
Romero	Hartley			59.0		90	4	27	21†	53	0.04		0.04	0.5	1	23	3	5	sw.	R. S. Chamberlain.
Sherman	Grayson	745	17	66.0	+ 0.2	91	1	31	28	37	0.74	− 2.58	0.63	0.0	2	18	10	3	s.	R. A. Gibbs.
Sulphur Springs	Hopkins	530	18																	O. M. Pate.
Texline	Dallam	4,694	5					21	22		0.25		0.25	2.5	1	25	3	3		Ft. Worth & Denver City Ry.
Tulia	Swisher	3,501	12	60.4		98	8	18	28	54	0.70	− 1.26	0.46	1.5	3	20	9	2	sw.	Lou Mulhall.
Winfield	Titus										0.68		0.29	0.0	4	19	10	2	se.	J. C. Bostick.
Kansas.																				
Alden	Rice	1,684									0.22		0.22	0.0	1				s.	Percy Torrey.
Anthony	Harper	1,329	13	62.3		96	1	24	28	46	0.06	− 2.21	0.05	0.0	2	18	10	3	sw.	R. H. Beebe.
Ashland	Clark	1,951	22	60.8	+ 2.6	97	1	20	29	55	0.25	− 1.63	0.19	0.0	2	20	9	2	s.	C. W. Carson.
Burlington	Coffey	1,010	17	60.2	+ 1.7	93	1	21	29	41	0.54	− 1.88	0.54		1	21	6	4	s.	O. E. Sanford.
Chanute	Neosho	940	6	60.8		91	1	20	29	45	1.46		1.30	0.0	2	22	4	5	s.	Chase W. Brown.
Cimarron	Gray	2,700	4	61.0		93	1†	15	28	53	1.25		1.15	0.5	2	18	11	2	s.	Fred Mallonee.
Coldwater	Comanche	2,090	13	62.3	+ 4.3	95	1	23	28	44	1.31	− 0.61	1.26	T.	2	21	7	3	s.	J. L. Stanley.
Columbus	Cherokee	898	20	60.0	+ 1.1	91	1	23	29	34	2.70	− 0.33	1.30	0.0	6	25	2	4	sw.	O. E. Skinner.
Coolidge	Hamilton	3,348	13	58.4	+ 5.1	97	8	11	28	60						22	5	4	se.	W. R. Padley.
Cottonwood Falls	Chase	1,234	6	59.8		92	1	17	29	46	1.14		0.80	0.0	3	23	4	4	s.	E. B. Greene.
Council Grove	Morris	1,234	1	58.8		93	1	18	29	45	0.50		0.50	T.	1	23	3	5	s.	Jas. Sharpe.
Cunningham	Kingman	1,680	26	61.7	+ 2.9	96	1	22	28	47	0.30	− 1.81	0.30	0.0	1	19	10	2	s.	W. H. Morton.
Dodge City	Ford	2,513	36	59.3	+ 4.6	92	8	22	28	47	0.34	− 1.06	0.15	0.3	3	23	6	2	se.	U. S. Weather Bureau.
El Dorado	Butler	1,291	8	60.1		91	1	21	29	42	0.33		0.23	0.0	3	23	5	3	s.	W. Y. Miller.
Ellinwood	Barton	1,790	35	61.6	+ 4.9	95	1	22	28	50	0.15	− 1.74	0.15	T.	1	18	11	2	s.	Martin Musil.
Emporia	Lyon	1,138	29	60.5	+ 3.1	93	1	23	29	41	0.90	− 1.81	0.63	0.0	2	23	4	4	s.	W. H. Boyles.
Eureka	Greenwood	1,412	14	60.6		93	1	17	29	43	0.45	− 2.60	0.45		1	21	8	2	s.	T. C. Peffer.
Fall River	do	925	14	60.8	+ 1.7	94	1	20	29	44b	1.00	− 1.12	1.00	0.0	1	23	6	2	s.	J. McDaniel.
Fargo	Seward		1																	Ray Swink.
Fredonia	Wilson	864	7	62.2		94	1	22	29	41	1.47		1.30	0.0	3	22	2	7	se.	B. W. Holmes.
Garden City	Finney	2,836	21	58.6	+ 3.0	93	1	19	28	56	T.	− 1.08	T.	0.1	0	20	8	3	s.	B. F. Stocks.
Great Bend	Barton	1,850	1																	Isaac Pritchard.
Greensburg	Kiowa	2,235	3	60.2d		94	1	21	28	48d	0.43		0.35	1.0	2	23	2	2	s.	C. C. Raymond.
Grenola	Elk	1,116	23	59.9	+ 0.6	94	1	17	29	45	0.77	− 1.86	0.62	0.0	2	22	2	7	s.	R. M. Lawyer.
Howard	do	1,112	3								0.94		0.90	0.0	2	23	4	4	sw.	J. W. Eby.
Hugoton	Stevens		6	59.4		96	1	12	28	64	0.07		0.07	0.2	1	26	5	0	s.	E. M. Anderson.
Hutchinson	Reno	1,535	20	60.8	+ 2.0	94	1	19	28	48	0.17	− 1.42	0.09	0.0	2	25	4	2	s.	E. S. Webster.
Independence	Montgomery	816	37	62.8	+ 2.6	95	1	20	29	47	1.50	− 1.44	1.15	0.0	6	20	3	8	s.	F. L. Kenoyer.
Iola	Allen	984	4	59.7	+ 2.8	90	1	23	29	37	1.14	− 1.13	1.10	0.0	3	20	7	4	s.	U. S. Weather Bureau.
Irene	Hamilton	3,440		57.7		94	1†	14	28	60	T.		T.	0.0	0	23	4	2	nw.	N. M. Herbig.
Jetmore	Hodgeman	2,268	9	59.9		95	1	16	28	54	0.98		0.92	T.	2	9	18	4	sw.	James Aiken.
Kingman	Kingman	1,504	2	61.2		95	1	22	21†	46	0.40		0.28	0.0	2	16	12	3	sw.	B. B. Anawalt.
La Crosse	Rush	2,061	8	58.9d		96	1†	20	21	55d	0.13		0.13	T.	1	20	5	2	sw.	Rodney Torrey.
Lakin	Kearney	2,993	20	56.2	+ 1.2	91	1	15	28	56	T.	− 0.93	T.	T.	0	22	9	0	s.	C. H. Longstreth.
Larned	Pawnee	2,090	25	61.6		98	1	21	28	49	0.70	− 0.79	0.70	0.0	1	20	8	3		H. H. Wolcott.
Lebo	Coffey	1,138	24	59.8	+ 2.5	89	1	24	29	36	0.35	− 2.37	0.35	0.0	1	23	4	4	s.	J. J. Bowman.
Le Roy	do	990	1								0.62		0.40		2	25	0	6	s.	F. W. Schmitt.
Liberal	Seward	2,843	3	60.8		93	1†	19	28	51	0.11		0.11	1.0	1	24	1	6	se.	Dr. R. T. Nichols.
Macksville	Stafford	2,032	21	60.6	+ 4.3	95	1	22	28	46	0.42	− 1.77	0.35	T.	2	18	8	5	s.	Mrs. Nelia Poling.
McPherson	McPherson	1,495	21	60.6	+ 2.0	96	1	20	28	45	0.70	− 2.02	0.70	0.0	1	25	3	3	sw.	Ed. F. Haberlein.
Madison	Greenwood	1,074	9	58.8		93	1	16	29	48	0.32	− 2.65	0.32	0.0	1	19	8	4	se.	C. A. David.
Marion	Marion	1,310	17	60.0	+ 1.1	92	1	22	29	43	0.78	− 1.50	0.54	0.0	4	17	11	2	s.	Jerry Forney.
Medicine Lodge	Barber	1,259	17	61.2	+ 1.8	97	1	19	21	53	0.49	− 1.66	0.25	T.	2	24	6	1	s.	S. P. Garrison.
Medora	Reno	1,484	1																	M. L. Richenbrode.
Mount Hope	Sedgwick	1,410	13								0.44	− 1.76	0.31	0.0	2	23	5	3	s.	H. N. Renfrew.
Neosho Rapids	Lyon	1,092	5								0.50		0.25		2	22	1	8	s.	Susan P. Whipple.
Ness City	Ness	2,260	17																	J. K. Barnd.
Newton	Harvey	1,454	13	61.6	+ 2.3	94	1	23	28	45	0.40	− 2.57	0.28	0.0	2	25	4	2	s.	H. A. Brush.
Norwich	Kingman	1,496	14	62.6	+ 2.6	95	1	24	28	42	0.55	− 1.80	0.43	0.0	2	20	10	1	se.	N. I. Farris.
Oswego	Labette	899	16	61.4	+ 1.1	91	1	23	29	39	3.29	+ 0.25	2.54	0.0	5	19	8	4	sw.	Jas. M. Currigan.
Plains	Meade	2,766		60.0		93	1	22	28	51	1.18		1.00	T.	3	23	3	5		E. J. Henning.
Pratt	Pratt	1,950	15																	E. H. Ellsworth.
Rome	Sumner	1,218	24	61.1	+ 1.9	96	1	17	29	50	0.15	− 2.30	0.10	0.0	2	25	2	4	s.	D. M. Adams.
Sedan	Chautauqua	834	25	61.5	+ 1.7	96	1	20	29	43	1.54	− 1.04	1.19	0.0	5	22	6	3	s.	A. Y. Buckles.
Toronto	Woodson	1,040	13	61.8	+ 2.8	97	1	19	29	53	0.81	− 1.55	0.81	0.0	1	21	3	7	s.	M. A. Webb.
Ulysses	Grand	3,027	19	57.9d	+ 0.7	95	8	15	21†	57d	0.05	− 0.78	0.05	0.5	1	18	8	3	sw.	T. W. Marshall.
Walnut	Crawford	940	8	61.6		92	2	23	29	40	1.71		1.30		4	25	3	3	sw.	R. C. Harlan.
Wichita	Sedgwick	1,377	23	61.3	+ 2.5	93	1	26	28	38	0.52	− 1.78	0.44	0.0	3	19	8	4	se.	U. S. Weather Bureau
Winfield	Cowley	1,124	16	59.8	+ 0.4	90	1	21	29	43	0.17	− 2.22	0.17	0.0	1	21	7	3	s.	M. B. Light.
Yates Center	Woodson	1,068	31	60.4	+ 2.0	93	1	17	29	50	0.78	− 2.11	0.78		1	19	8	2	se.	J. W. Tipton.
Oklahoma.																				
Ada	Pontotoc	1,001	3								1.64		0.97	0.0	4					Dr. J. P. McKinley.
Alva	Woods	1,350	6	61.7e		90	24	25	28†	50	0.10		0.10	0.0	1				s.	L. W. Sandefur.
Apache	Caddo	1,255	1	63.7		97	1	26	28	46	1.40		0.54	0.0	6	27	2	2	s.	G. D. Teeter.
Arapaho	Custer	1,575	17								0.54	− 1.53	0.34	T.	2	25	0	2		Geo. E. Marsh.
Ardmore	Carter	872	9	65.6	+ 0.4	98	1†	28	29	44	1.15	− 2.19	0.95	0.0	3	23	3	5	n.	H. T. Nisbett.
Bartlesville	Washington	687	4	62.5		97	2	22	29	47	2.61		2.15	0.0	4	20	6	5	se.	Dr. A. P. Owens.
Beaver	Beaver	2,500	14	60.4	+ 2.6	95	1	22	28	48	0.47	− 0.97	0.20	T.	3	24	4	3	s.	W. C. Frazer.
Blackburn	Pawnee	800	6	63.6		99	1	22	29	49	2.04		1.21	0.0	4	25	5	1	se.	J. Landis.
Cache	Comanche	1,350	5	60.4		92	1	21	29	46	1.82		0.75	0.0	5	26	3	2	s.	Frank Rush.
Calvin	Hughes	713	6								1.15		0.87	0.0	5	22	0	9	s.	Thomas Purcell.
Chandler	Lincoln	865	6																	Chas. L. Tuttle.
Chattanooga	Comanche	1,150	5	65.2		96	1	30	28†	46	2.09		0.87	0.0	4	26	2	3	ne.	Squire Humble.
Chickasha	Grady	1,091	10																	J. C. Good.
Cloud Chief	Washita	1,400	10	65.4	+ 2.6	99	1	29	28†	51	0.63	− 1.38	0.45	0.0	2	23	7	1	se.	J. P. Stutzman.

TABLE 1.—*Climatological data for October, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oklahoma—Cont'd.																				
Dacoma	Woods	1,337	13	61.0	+ 0.2	95	1	26	27	54	0.13	− 2.23	0.13	0.0	1	21	8	2	s.	R. H. Bruce.
Durant	Bryan	643	10	65.1	+ 1.8	97	14	25	30	49	0.72	− 3.27	0.69	0.0	3	22	3	6	n.	Nelson Houk.
Eldorado	Jackson	1,456	4	65.2	.....	96	1	26	28	47	0.62	.....	0.59	0.0	2	14	14	3	se.	T. W. Lanham.
El Reno	Canadian	1,400	19	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Pearl Maddox.
Enid	Garfield	1,269	11	61.6	.....	100	1	28	22†	50	0.83	.....	0.42	0.0	5	21	8	2	s.	Uri. B. Worcester.
Erick	Beckham	2,058	7	63.3°	.....	100	1	23	28	49	0.29	.....	0.25	0.0	2	20	3	2	s.	A. W. Hanes.
Fairland	Ottawa	839	11	62.5	+ 1.0	95	1	21	29	41	2.79	− 0.26	0.77	0.0	7	20	7	4	s.	C. W. Prior.
Fort Gibson	Muskogee	556	6	.....	.....	.....	.....	.....	.....	.....	2.22	.....	1.08	0.0	7	24	1	6	e.	John T. Welsh.
Frederick	Tillman	1,293	7	65.6	.....	96	1	26	28	43	1.75	.....	0.78	0.0	6	24	4	3	s.	B. B. Bradley.
Gage	Ellis	2,136	8	60.4	.....	97	1	22	28	59	1.07	.....	0.55	0.0	4	26	5	0	s.	C. H. Holmes.
Goodwell	Texas	3,300	..	58.9	.....	89	14	19	28	51	0.02	.....	0.02	0.2	1	27	2	2	s.	S. W. Black.
Guthrie	Logan	1,000	8	64.8	+ 1.9	98	1	23	29	47	0.80	− 1.97	0.45	0.0	3	17	11	3	s.	G. W. Derrick.
Guymon	Texas	3,133	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. L. Mordt.
Harrington	Roger Mills	2,200	7	62.6	.....	95	1	23	28	44	0.45	.....	0.33	0.0	2	24	5	2	sw.	T. Compton.
Hartshorne	Pittsburg	700	12	63.7	− 1.1	95	1	24	29	46	1.91	− 2.14	1.10	0.0	6	24	2	5	s.	Edward Glendenning.
Healdton	Carter	900	17	64.8	+ 1.5	98	14	20	29	52	1.03	− 1.85	0.96	0.0	2	24	6	1	s.	C. H. Heald.
Helena	Alfalfa	1,396	3	63.2	.....	95	1	26	21†	45	0.02	.....	0.02	0.0	1	23	7	1	s.	Frank Horsfall.
Hennessey	Kingfisher	1,166	16	65.3	+ 2.0	98	3	26	29	46	0.90	− 1.54	0.55	0.0	3	15	13	3	.....	W. W. Parks.
Hobart	Kiowa	1,396	7	64.0	.....	95	1	28	28	39	1.11	.....	0.87	T.	2	19	9	3	s.	Roy Benedict.
Holdenville	Hughes	900	10	63.3	+ 1.4	96	1	25	29†	47	1.06	− 1.65	0.91	0.0	2	29	0	2	s.	Miss M. Rutherford.
Hooker	Texas	2,999	5	59.8	.....	98	13	11	28	59	0.02	.....	0.02	0.2	1	24	2	5	s.	H. M. Kelley.
Hurley	Cimarron	3,600	2	56.6	.....	91	4†	21	21†	48	0.07	.....	0.05	0.2	2	17	11	3	n.	C. W. Meyers.
Idabel	McCurtain	474	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	M. L. Henderson.
Jefferson	Grant	1,062	17	61.0	+ 2.0	96	1	22	29	50	0.08	− 2.57	0.08	0.0	1	23	6	2	.....	T. E. Beck.
Kenton	Cimarron	4,000	11	57.4	+ 1.5	90	4†	17	28	60	0.03	− 0.89	0.03	T.	1	25	2	4	n.	L. A. Wikoff.
Kingfisher	Kingfisher	1,046	13	64.9	+ 2.0	98	1	25	29	50	0.72	− 2.55	0.36	0.0	3	20	9	2	s.	J. C. Cross.
McAlester	Pittsburg	698	18	66.2	.....	98	1	27	29	43	3.49	− 0.54	1.55	0.0	5	23	4	4	n.	Wm. Noble.
McComb	Pottawatomie	1,200	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jas. E. McNair.
Mangum	Greer	1,585	18	62.4	− 0.4	97	1	27	28	49	0.87	− 1.26	0.47	0.0	5	23	6	2	s.	M. J. Northcutt.
Marlow	Stephens	1,292	10	64.2	+ 1.4	95	1†	28	28†	44	3.42	+ 1.04	1.72	0.0	3	19	3	9	se.	W. B. Anthony.
Meeker	Lincoln	1,030	17	61.6	+ 0.4	98	1	23	30	48	1.85	− 1.29	0.80	0.0	3	26	1	4	s.	Dr. J. B. Baugh.
Muskogee	Muskogee	614	12	64.3	+ 2.0	94	1	21	29	43	1.77	− 1.75	1.10	0.0	4	23	2	6	se.	Prof. E. N. Collette.
Mutual	Woodward	.....	4	62.1	.....	97	1	30	28	50	0.31	.....	0.16	0.0	2	23	5	3	s.	Thos. Martin.
Neola	Caddo	1,500	5	60.6	.....	89	2†	27	28	44	1.09	.....	0.44	0.0	3	23	5	3	s.	R. N. Schooling.
Newkirk	Kay	1,149	14	65.4	+ 4.0	98	1	26	28	42	0.14	− 3.07	0.14	0.0	1	21	8	2	s.	P. H. Albright & Co.
Norman	Cleveland	1,171	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Walter H. Meier.
Oakwood	Dewey	1,854	...	61.2	.....	95	1	22	28	49	0.32	.....	0.24	T.	2	24	5	2	s.	Dr. F. P. Osborn.
Okeene	Blaine	1,194	7	63.4	.....	97	1	24	28	44	0.73	.....	0.46	0.0	2	24	6	1	s.	Dr. L. H. Murdoch.
Oklahoma	Oklahoma	1,247	21	62.8	+ 1.5	94	1	28	28	33	1.31	− 0.50	0.77	0.0	6	20	8	3	s.	U. S. Weather Bureau.
Okmulgee	Okmulgee	752	8	62.7†	.....	91	3	21	29	45	1.79	.....	1.00	0.0	2	.....	.....	.....	s.	J. L. Maynard.
Pauls Valley	Garvin	880	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. M. Foss.
Pawhuska	Osage	918	12	63.9	+ 3.6	97	1	25	29	41	2.62	− 1.34	1.72	0.0	4	20	7	4	s.	R. C. Block.
Perry	Noble	1,060	13	64.8	+ 2.7	96	1	26	28	44	1.57	− 1.89	1.20	0.0	3	21	8	2	s.	J. A. Douglas.
Ravia	Johnson	796	9	65.6	.....	97	1	23	29	45	0.93	.....	0.93	0.0	1	23	6	2	s.	R. G. Guptill.
Sac & Fox Agency	Lincoln	900	18	64.3	+ 2.8	95	1	27	29	38	1.77	− 1.23	0.85	0.0	3	25	2	4	sw.	D. B. Taylor.
Shawnee	Pottawatomie	1,041	10	61.9	0.0	96	1	26	29	43	2.45	− 0.33	1.31	0.0	5	21	3	7	s.	Neal R. Clark.
Snyder	Kiowa	1,356	4	65.4	.....	95	1	31	21†	44	0.93	.....	0.45	0.0	3	27	2	2	s.	Dr. W. C. Woodard.
Stillwater	Payne	880	18	60.8	− 0.1	95	1	25	29	43	1.33	− 1.64	0.66	0.0	5	23	3	5	nw.	J. M. Speidel.
Supply	Woodward	2,100	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. H. Trumbo.
Tulsa	Tulsa	700	22	63.9	.....	97	1	29	29†	45	2.25	+ 2.14	3.75	0.0	4	19	6	6	sc.	William Hall.
Vinita	Craig	698	7	62.6	.....	96	1	20	29	44	1.98	.....	0.80	0.0	4	23	3	5	n.	C. E. Lahman.
Wagoner	Wagoner	588	11	62.4	− 0.4	95	1	23	29	40	2.01	− 1.30	0.75	0.0	6	.....	.....	.....	s.	S. L. Hatfield.
Waukomis	Garfield	1,258	14	62.7	− 0.3	98	1	23	29	45	0.35	− 1.94	0.60	0.0	4	21	8	2	s.	R. C. Shades.
Waurika	Jefferson	988	...	65.9	.....	96	1	29	29	42	1.06	.....	0.78	0.0	2	23	5	2	s.	B. A. Swindler.
Weatherford	Custer	1,639	9	62.8	+ 0.7	99	1	27	28	48	0.83	− 1.25	0.57	0.0	3	23	5	3	s.	M. D. Reed.
Webbers Falls	Muskogee	479	12	62.2	+ 0.6	94	1	22	29	44	6.50	+ 3.33	2.00	0.0	5	19	9	3	w.	B. D. Boulineau.
Whiteagle	Kay	945	5	61.0	.....	92	25	26	28	52	1.40	.....	1.40	0.0	1	23	7	1	s.	J. M. Dankwardt.
Woodward	Woodward	1,886	1	61.5	.....	95	1	20	28	50	0.38	.....	0.22	T.	5	27	2	2	s.	R. A. Boyle.
Missouri.																				
Belle	Maries	.....	18	59.8	− 0.1	87	1†	29	28	41	3.50	+ 1.21	1.80	0.0	3	18°	4°	6°	s.	A. J. Wofford.
Birchtree	Shannon	1,200	17	60.7	+ 2.8	90	1	19	29	35	4.65	+ 2.63	2.46	0.0	3	24	4	3	s.	V. H. Kirkendall.
Cape Girardeau	Cape Girardeau	305	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	D. L. Albert.
Caruthersville	Pemiscot	.....	20	62.4	+ 2.7	94	2	20	29	43	11.36	+ 9.15	4.15	T.	7	21	3	7	so.	H. E. Averill.
Dean	McDonald	.....	11	60.0	− 0.6	93	1	18	29	45	3.43	+ 0.73	1.45	0.0	6	22d	0d	5d	.....	H. E. Dean.
Doniphan	Ripley	440	6	59.0	.....	91	1	21	29	40	7.80	.....	4.33	0.0	6	23a	2a	5a	s.a	W. W. Martin.
Farmington	St. Francois	889	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Miss Carrie Sneed.
Gano	Dent	.....	7	59.7	.....	91	1	21	29	41	4.43	.....	2.53	T.	5	22	4	5	s.	A. C. Leech.
Goodland	Iron	900	5	57.6	.....	90	1	16	29	48	4.34	.....	2.05	T.	3	21a	3a	6a	s.a	F. M. Adams.
Greensville	Wayne	.....	16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. G. Templeton.
Hollister	Taney	1,000	...	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. P. Chapman.
Ironton	Iron	925	32	57.6	+ 1.8	91	1	18	29	46	5.12	+ 2.45	2.30	T.	6	19	6	6	n.	W. H. Delano.
Jackson	Cape Girardeau	458	19	61.4	+ 4.7	94	1	22	29	42	7.98	+ 5.29	3.52	0.0	4	20	4	7	s.	L. M. Bean.
Joplin	Jasper	979	32	63.4	.....	90	1†	26	29	39	2.00	− 1.13	0.70	0.0	6	26	0	5	sw.	Miss E. Russum.
Koshkonong	Oregon	911	10	61.3	.....	90	1	25	29	34	4.33	+ 2.22	1.43	0.0	7	18	5	8	nw.	J. W. Hitt.
Lamar	Barton	964	30	61.0	+ 2.4	93	1	23	29	47	1.51	− 1.55	0.47	0.0	6	25	1	5	s.	E. H. Adams.
Marble Hill	Bollinger	420	19	59.1	+ 1.7	94	1	20	29	46	7.53	+ 5.40	3.20	0.0	5	20	7	4	s.	A. F. Hemdrix.
Mountaingrove	Wright	1,490	11	58.8	.....	88	1	21	29	30	3.57	+ 1.14	1.41	0.0	6	21	5	5	s.	Mo. Fruit Exp. Station.
Mount Vernon	Lawrence	1,480	34	61.0	+ 1.7	94	1	21	29	36	3.02	− 0.30	1.47	0.0	7	24	3	4	sw.	C. L. White.
Neosho	Newton	1,023	27	60.0	+ 0.8	91	1	19	29	42	2.89	− 0.29	0.70	0.0	9	24	4	3	sw.	W. O. Buck.
New Madrid	New Madrid	285	16	.....	.....	.....	.....	.....	.....	.....	14.03	+11.36	5.20	0.0	9	20	2	9	sc.	Miss Josie Smith.
Oakfield	Franklin	793	18	60.9	+ 2.2	89	1	23	29	37	3.91	+ 1.48	2.72	T.	6	17	10	4	sw.	E. E. Steines.
Olden	Howell	1,246	20	60.6	+ 1.8	89	1	21	29	34	4.32	+ 1.97	2.42	T.	2	24	4	3	sw.	J. D. Evans.
Perryville	Perry	582	1	61.5	.....	89	19	28	27	35	6.15	.....	2.80	0.0	4	17	0	14	s.	Superintendent of Schools.
Rolla	Phelps	1,092	29	59.8	.....	88	1	20	29	34	2.35	.....	1.08	T.	7	23	3	5	sw.	Prof. P. J. Wilkins.
Sikeston	Scott	328	15	62.3	+ 2.9	93	1	28	29	38	12.02	+ 9.64	5.50	0.0	7	22	3	6	ne.	A. A. Harrison.
Springfield	Greene	1,350	22	59.4	+ 2.1	87	1	25	29	29	3.08	+ 0.28	1.78	0.0	8	18	8	5	s.	U. S. Weather Bureau.
Steelville	Crawford	746	14	58.8	.....	91	2	29	22	51	3.31	+ 1.13	1.48	T.	4	15	7	9	sw.	Edwin Pumphrey.
Kentucky.																				
Blandville	Ballard	445	30	61.4	+ 3.5	89	1†	26	29	32	11.15	+ 8.42	4.29	T.	8	20	5	6	sw.	E. W. Horr.
Lynnville	Graves	.....	9	62.2	.....	96	2	24	2	39	7.10	.....	.....	T.	6	22	0	9	s.	Wm. Scherffins.
Tennessee.																				
Arlington	Shelby	.....	28	61.0	+ 1.8	90	2	28	29	37	6.40	+ 4.25	3.20	T.	6	20	0	11	e.	A. T. B. Etheridge.
Bolivar	Hardeman	450	23	61.4	+ 2.2	90	2	27	29†	38	4.41	+ 1.87	3.11	T.	8	19	1	11	s.	Miss M. A. Smith.
Brownsville	Haywood	361	25	62.8	+ 3.6	90	1	29	29†	38	8.78	+ 6.45	6.19	T.	9	17	10	4	s.	Miss Hattie M. Moses.
Covington	Tipton	311	23	61.7	+ 1.7	88	2	28	29	32	10.47	+ 8.39	8.45	T.	9	20	0	11	n.	J. S. Ruffin.
Dyersburg	Dyer	310	27	62.2	+ 3.0	90	2	27	29†	39	9.17	+ 6.88	6.20	T.	6	23	0	8	ne.	Miss M. A. Sinclair.
Jackson	Madison	450	17	61.1	+ 0.9	93	1	21	29	43	4.25	+ 1.84	3.10	T.	7	14	8	9	se.	Prof. S. A. Robert.

TABLE 1.—*Climatological data for October, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Tennessee—Cont'd.																		
Kenton	Obion	325	8	63.8		96	1	24	29	36	8.83		4.90	T.	8	20	4	7	n.	G. S. Martin.
Memphis	Shelby	409	39	64.1	+ 1.6	90	2	28	29	26	6.85	+ 4.11	4.17	T.	8	18	7	6	s.	U. S. Weather Bureau.
Milan	Gibson	440	27	60.6	+ 1.8	91	2	21	30	39	7.03	+ 4.56	5.25	T.	10	19	1	11	s.	O. F. Cantwell.
Trenton	do	345	27	61.4	+ 2.6	95	1	21	29	43	7.22	+ 4.51	6.00	T.	6	23	1	7	sw.	Prof. F. L. Dennison.
Union City	Obion	360	12	62.4	+ 1.4	92	1	25	29	39	6.93	+ 4.92	2.27	T.	6	20	6	5	nw.	J. B. Kinsey.
Arkansas.																				
Alicia	Lawrence		6	61.6		89	2	29	29	40	8.35		4.95	0.0	4	27	1	3	sw.	McCullough & Guelck.
Amity	Clark	250	18	64.2	+ 1.0	95	1	22	29	48	2.24	− 0.69	0.61	0.0	9	21	5	5	ne.	Prof. S. M. Samson.
Arkadelphia (near)	do	250	3	65.7		91	1	27	29	36	5.79		1.81	0.0	8	26	1	4	sw.	J. A. Ross.
Arkansas City	Desha	145	27								3.60	+ 1.96	1.10	0.0	8					W. C. Blundell.
Batesville	Independence	271	11								7.76		4.32	0.0	7					Miss Lelia I. Teter.
Bee Branch	Van Buren		18	63.5	+ 1.1	95	1	23	29	40	11.85	+ 9.45	8.50	0.0	5	22	4	5		J. E. Scanlon.
Benton	Saline	283	3	64.8		95	1†	28	29	39	6.61		1.93	0.0	6	19	5	7	s.	J. E. Evans.
Bentonville	Benton	1,303	5	59.4	+ 1.4	89	1	23	29	36	2.42	− 0.39	0.68	0.0	7	23	4	4	s.	U. S. Weather Bureau.
Bergman	Boone	1,324	14	57.0	− 2.8	90	1	16	29	51	2.86	+ 0.67	0.77	0.0	5	23	4	4	nw.	John T. Maxey.
Black Rock	Lawrence		6								5.35		2.59	0.0	6					S. J. Howe.
Brinkley	Monroe	226	24	63.0	+ 1.1	95	1	24	29	43	9.17	+ 6.73	3.20	0.0	8					H. L. D. Whitson.
Calico Rock	Izard	361	6								4.76		2.00	0.0	4					W. H. Stoner.
Camden	Ouachita	158	25	65.8	+ 2.4	92	1†	23	29	45	2.28	− 0.08	0.72	0.0	6	21	1	9	ne.	R. H. Quarterman.
Centerpoint	Howard		10	66.0	+ 1.1	94	1	24	29	45	3.55	+ 0.62	2.05	0.0	4	25	1	5	nw.	J. M. Huddleston.
Clarendon	Monroe	171	6								5.03		1.67	0.0	8					Mrs. B. E. Bishop.
Conway	Faulkner	309	27	62.2	+ 1.1	91	1	24	29	37	3.81	+ 1.64	1.10	0.0	8	20	6	5	nw.	G. H. Burr.
Corning	Clay	293	18	62.0	+ 3.2	92	1	24	29	40	9.08	+ 6.61	5.97	T.	6	18	7	6	s.	Jacob Brobst.
Dardanelle	Yell	330	24	62.0		95	1	23	29	46	5.34	+ 3.04	3.44	0.0	6					A. Bernard.
Dennard	Van Buren																			Fred B. Brown.
Dodd City	Marion	1,175	29	59.3[a]	− 0.9	89	....	20	....	41[a]	3.85	+ 0.20	2.16	0.0	5				s.	Neal Dodd.
Dutton	Madison		9	63.4[a]		92		26		53[a]	4.23		1.41	0.0	5					Edward Mize.
Earl	Crittenden		4	62.4		94	1	23	29	40	7.05		2.41	0.0	6	24	5	2		W. J. Moss.
Eldorado	Union	265	6	66.5		93	1	28	29	42	1.97		0.82	0.0	6					Jeff J. Babb.
England	Lonoke		4																	J. C. Chenault.
Eureka Springs	Carroll		9	59.2		89	1†	22	29	32	3.80		1.30	0.0	4	20	7	4	sw.	S. H. Britts.
Fayetteville	Washington	1,451	21	61.0	+ 0.6	91	1	21	29	45	3.60	+ 0.55	1.10	0.0	7	19	3	9	sw.	University of Arkansas.
Fort Smith	Sebastian	481	28	63.2	+ 1.5	92	1	28	29	35	2.69	− 0.14	1.22	0.0	7	20	6	5	e.	U. S. Weather Bureau.
Fulton	Hempsted	264	6								3.00		2.00	0.0	4					B. C. Logan.
Hardy	Sharp	643	12	61.4	+ 0.3	88	2†	23	29	41	6.34	+ 3.93	3.35	T.	7	16	8	7	nw.	C. A. Caywood.
Helena	Phillips	182	25	64.8	+ 2.5	94	1†	25	29	42	4.94	+ 2.60	3.08	0.0	7					B. F. Modisett.
Hot Springs	Garland	600	4	64.5		92	1	24	29	43	3.53		0.78	0.0	9	22	0	9	w.	Hot Springs Water Co.
Huttig	Union	85	3	66.8		92		26		41[b]	2.70		1.03	0.0	6					C. A. Berry.
Jonesboro	Craighead	345	15	61.9	+ 0.1	95	1	21	29	44	7.98	+ 5.32	3.50	0.0	6	15	14	2	nw.	Benedictine Sisters.
Junction	Union		17	64.4	+ 0.9	91	1	25	29	42	1.93	− 1.29	0.85	0.0	4	21	5	5	sw.	J. A. Lowderback.
Lake Farm	Jefferson	195	3	64.2		92	1†	22	29	44	4.84		2.60	0.0	5	21	6	4	s.	R. H. Gillespie.
Lewisville	Lafayette	262	7	67.0		95		26		40[b]	5.16		2.69	0.0	7					F. W. Youmans.
Little Rock	Pulaski	357	31	64.0	+ 1.1	90	1	21	29	32	6.44	+ 3.18	3.18	0.0	10	21	4	6	ne.	U. S. Weather Bureau.
Lutherville	Johnson	775	13	61.6	− 0.1	90	1	22	29	40	5.43	+ 2.24	3.52	0.0	6	20	5	6	sw.	Herman Hentschel.
Malvern	Hot Spring	277	23	62.8	− 0.3	92	1	29	29	38	4.66	+ 2.50	1.65	0.0	6					Miss L. C. Smith.
Mammoth Spring	Fulton		6	59.0		91	1	19	29	45	4.33		1.88	0.0	8	18	11	2		F. Wallick.
Marked Tree	Poinsett		6								16.01		7.45	0.0	7					L. Smith.
Mena	Polk	1,100	24	65.1	+ 2.7	92	1	27	29	34	1.67	− 0.81	0.90	0.0	6	22	8	1	n.	R. R. St. John.
Mossville	Newton		17	58.6	− 0.9	84	1	26	29	28	3.02	− 0.57	1.60	0.0	4	21	4	6	n.	Theo. Ober.
Mount Nebo	Yell	1,750	20																	T. G. Church.
Newport	Jackson	231	26	61.4	+ 0.7	90	1	26	29	37	10.88	+ 8.93	6.00	0.0	6					L. R. Cobb.
Ozark	Franklin	377	19	63.2	− 0.7	90	17	28	29	38	6.72	+ 4.04	2.55	0.0	6	23	4	4	e.	R. M. Adams.
Pine Bluff	Jefferson	215	22	65.6	+ 2.3	93	1	27	29	40	5.37	+ 3.38	2.30	0.0	7					J. M. Hudson.
Pocahontas	Randolph		18	63.2	+ 3.5	94	1	26	29	42	7.40	+ 5.05	2.36	0.0	6	20	5	6		Benedictine Sisters.
Pond	Benton	1,250	13	60.1	+ 0.7	91	1	18	29	43	2.47	− 0.43	0.71	0.0	6	14	10	7	sw.	A. F. Stevens.
Portland	Ashley	122	1	64.6		92	2	23	29	46	2.52		0.80	0.0	7					L. W. Gregory.
Prescott	Nevada	327	22	64.4	+ 0.2	93	2	23	29	42	4.37	+ 2.03	1.71	0.0	6					A. M. Ellsworth.
Rogers	Benton	1,385	19	60.3	+ 0.8	90	1	22	29	40	4.05	+ 1.45	1.39	0.0	5	23	2	6	s.	Carl A. Stark.
Springbank	Miller	182	3								1.27		0.73	0.0	5					G. Field.
Stuttgart	Arkansas	495	23																	H. A. Buerkle.
Subiaco	Logan	1,050	13	62.8	− 0.9	90	1†	27	29	38	6.73	+ 3.78	4.24	0.0	7	19	8	4	e.	New Subiaco Abbey.
Texarkana	Miller	332	26	65.4	− 0.4	90	1	29	29†	37	3.29	+ 0.78	2.45	0.0	4					D. E. Moore.
Warren	Bradley	304	15	64.2	0.0	93	1†	25	29	44	2.56	− 1.08	1.06	0.0	5					W. J. Savage.
Whitecliffs	Little River	206	6																	John E. Payton.
Wiggs	Garland		17	63.0	− 0.7	93	1	20	29	48	2.85	− 0.10	0.80	0.0	8	18	8	5	sw.	S. D. Jester.
Wynne	Cross		2	61.5		91	1	24	29	41	10.08		4.60	0.0	9					R. R. Poole.
Mississippi.																				
Anguilla	Sharkey	107	2	65.4		88	1†	25	29	35	3.44		1.38	0.0	8	17	2	12	ne.	E. W. Cook.
Austin	Tunica	200	14	64.2	+ 1.6	93	2	25	29	40	9.65	+ 7.37	3.98	0.0	8	23	1	7	n.	H. J. Irvine.
Batesville	Panola	230	22	64.4	+ 3.1	94	2	24	29	43	3.15	+ 1.46	1.65	0.0	8	20	0	11	e.	J. M. Cox.
Big Creek	Calhoun			63.2		94	1	25	29	40	4.95		2.23	0.0	7	13	8	10	s.	J. P. Havens.
Byhalia	Marshall	390	1								3.88		1.60	0.0	5	15	7	9	se.	Tallahatchie Dng. Com.
Canton	Madison	228	20	67.0	+ 2.6	95	1†	27	29†	44	4.12		2.91	0.0	7	14	10	7	ne.	Dr. G. W. Smith-Vaniz.
Charleston	Tallahatchie										4.00		2.05	0.0	3	21	2	8	w.	Tallahatchie Dng. Com.
Clarksdale	Coahoma	177	3	63.9		91	1†	26	29†	39	3.88		1.32	0.0	12	20	1	10	ne.	A. C. Tuttle.
Coffeeville	Yalobusha	241	1								4.67		2.50	0.0	6	19	9	3	n.	Tallahatchie Dng. Com.
Corinth	Alcorn	470	22	63.4	+ 2.5	92	1	26	29	38	4.65	+ 2.57	2.70	T.	7	20	2	9	se.	M. A. Candler.
Crenshaw	Panola	187	1								3.29		1.72	0.0	9	19	10	2	sw.	Tallahatchie Dng. Com.
Denmark	La Fayette		1								5.05		2.67	0.0	7					Do.
Duck Hill	Montgomery		11	65.1		96	5	25	29	44	6.30		3.70	0.0	7	15	14	2	s.	W. H. Eskridge.
Edwards	Hinds	222	23	68.2	+ 2.8	93	4	28	29†	38	3.96	+ 1.52	2.85	0.0	7	20	9	2	n.	E. F. Parr.
Enid	Tallahatchie		1								3.48		1.75	0.0	7				s.	Tallahatchie Dng. Com.
Fayette	Jefferson	270	9	67.2	+ 2.3	93	2	26	29	41	3.62	+ 1.18	2.15	0.0	4	17	10	4	nw.	T. L. Darden.
Greenville	Washington	126	23	65.2	+ 1.0	91	1†	29	29†	39	4.46	+ 2.43	1.15	0.0	10	20	0	11	se.	F. L. Harbison.
Greenwood	Le Flore	140	10	65.4	+ 1.9	94	2	25	29†	43	5.22	+ 3.40	2.78	0.0	12	17	2	12	s.	J. H. Stephen.
Grenada	Grenada	194	1								3.50		2.01	0.0	5	20	7	4	sw.	Tallahatchie Dng. Com.
Hernando	De Soto	391	22	64.8		93	1	26	29	37	3.23		1.25	0.0	7	21	1	9	n.	Mrs. Sarah B. Jones.
Hickory Flat	Benton	435	1								3.41		1.75	0.0	7	15	10	6	s.	Tallahatchie Dng. Com.
Holly Springs	Marshall	600	23	62.8	+ 1.1	90	2	23	29	33	2.42	+ 0.35	1.48	0.0	9	19	4	8	se.	L. B. Mosby.
Kosciusko	Attala	437	20	64.0	+ 1.7	91	1	27	29†	40	4.17	+ 1.96	1.70	0.0	11	20	5	6	e.	E. L. Lucas.
Lake Cormorant	De Soto	206	1								5.94		2.95	0.0	7	13	12	6	sw.	Tallahatchie Dng. Com.
Lula	Coahoma	182	1								4.39			0.0	6	12[4]	7[4]	3[4]		Do.
Malone	Marshall		1								3.78		1.98	0.0	6					Do.
Marks	Quitman	163	1								3.28		1.58	0.0	9					Do.
Natchez	Adams	206	22	69.0	+ 2.0	92	2†	31	29	40	2.61	− 0.04	1.00	0.0	7	16	7	8	n	J. C. Weir, Jr.
New Albany	Union	398	1								4.07		2.00	0.0	6	18	11	2	n.	Tallahatchie Dng. Com.
Pontotoc	Pontotoc	475	21	64.6	+ 2.3	92	2	26	29	34	3.01	+ 1.43	2.00	0.0	5	18	11	2	nw.	Dr. C. W. Bolton.

TABLE 1.—*Climatological data for October, 1910. District No. 7*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Mississippi—Cont'd.																				
Port Gibson	Claiborne	116	22	66.1	+ 1.9	94	1	25	30	46	3.14	+ 1.12	1.94	0.0	7	19	4	8	ne.	H. H. Crisler.
Rosedale	Bolivar	143	2	64.5	.....	93	2	27	29†	40	6.02	.....	2.00	0.0	11	18	2	11	nw.	T. J. Murray.
Senatobia	Tate	284	1	.....	.....	.....	.....	.....	.....	.....	4.18	.....	1.50	0.0	10	7	0	24	sw.	Tallahatchie Dng. Com
Shoccoe	Madison	.....	7	66.2	.....	93	1	24	29	40[a]	4.41	.....	2.50	0.0	4	20[a]	4[a]	5[a]	ne.	J. C. Pitchford.
Suffolk	Franklin	.....	9	68.6	.....	93	1	28	29†	39	4.31	.....	2.37	0.0	6	20	6	5	n.	Prof. Geo. H. Kent.
Swan Lake	Tallahatchie	148	9	.....	.....	.....	.....	.....	.....	.....	3.09	.....	2.00	0.0	4	.....	.....	.....	.....	B. F. Saunders.
Tchula	Holmes	130	5	66.4	.....	94	3	25	29	41	5.90	.....	3.25	0.0	4	14	10	7	n.	Dr. M. P. Winkler.
University	LaFayette	302	17	64.5	+ 1.4	90	2	26	29	31	3.59	+ 2.21	2.22	0.0	6	18	5	8	n.	Prof. J. H. Dorroh.
Utica	Hinds	287	6	66.6	.....	91	1†	25	29	39	2.52	.....	1.92	0.0	5	20	3	5	n.	Dr. J. B. Dudley.
Vicksburg	Warren	247	39	67.3	+ 2.0	90	17	34	29	30	2.95	+ 0.15	1.72	0.0	8	17	5	9	n.	U. S. Weather Bureau.
Water Valley	Yalobusha	300	21	65.5	+ 2.6	96	2	25	29	39	4.25	+ 1.74	2.00	0.0	8	21	4	6	e.	Miss Loula Erikson.
Woodville	Wilkinson	560	17	69.2	+ 2.6	94	1	29	29	35	1.79	− 0.88	1.46	0.0	5	24	6	1	se.	James E. Lee.
Yazoo City	Yazoo	116	16	65.0	+ 0.7	92	2†	30	29†	38[f]	6.46	+ 4.59	3.74	0.0	5	19	4	8	w.	W. H. Courts.
Louisiana.																				
Abbeville	Vermilion	18	22	69.2	+ 0.1	91	13	30	29	36	3.47	+ 0.10	1.70	0.0	8	16	8	7	n.	Hon. C. J. Edwards.
Alexandria	Rapides	77	19	67.0	+ 0.8	94	1	27	30	47	5.60	+ 2.90	1.74	0.0	6	15	1	15	s.	Miss Nellie Graham.
Amite	Tangipahoa	130	22	67.8	+ 1.3	91	1	28	29	42	3.75	+ 1.35	0.98	0.0	7	13	16	2	n.	Miss Lula M. Wentz.
Baton Rouge	E. Baton Rouge	35	22	71.2	+ 3.3	92	1†	40	30	34	2.52	− 0.76	1.67	0.0	7	20	1	10	ne.	Elmo M. Bott.
Burnside§	Ascension	20	10	68.0	− 0.4	91	1†	31	29	37[f]	3.03	+ 0.13	1.47	0.0	8	.....	.....	.....	ne.	C. S. McFarland.
Burrwood	Plaquemines	1	20	75.2	+ 1.8	89	19†	46	29	16	3.10	− 1.28	0.80	0.0	9	22	5	4	ne.	Graham Myers.
Cades§	St. Martin	.....	.....	69.6	.....	88	1†	33	29	32[a]	3.33	.....	2.00	0.0	5	18	7	6	n.	C. E. Smedes.
Calhoun	Ouachita	180	17	67.2	+ 2.9	95	2	24	29	44	1.89	− 0.52	1.35	0.0	3	16	12	3	ne.	N. L. Exp. Station.
Cameron	Cameron	6	15	71.9	+ 2.5	89	1	36	29	40	3.31	+ 0.99	1.78	0.0	3	20	7	4	ne.	State Biologic Station.
Cheneyville	Rapides	67	20	68.2	+ 2.4	92	1†	26	29†	46	3.36	+ 1.45	1.40	0.0	6	16	5	10	n.	Walter I. Tanner.
Clinton	East Feliciana	113	20	68.6	+ 1.6	90	2†	29	30	39	3.32	+ 0.80	2.71	0.0	6	13	8	10	n.	John A. White, Jr.
Collinston	Morehouse	65	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Page.
Covington	St. Tammany	39	17	69.3	+ 2.8	93	1	30	30	44	5.03	+ 2.38	1.85	0.0	10	15	4	12	s.	Mrs. Lucille Champagne.
Dodson	Winn	.....	1	68.4	.....	96	1	26	29	44	2.32	.....	1.52	0.0	3	19	6	6	n.	J. P. Lucas.
Donaldsonville	Ascension	33	20	73.0	+ 3.8	94	5†	35	29	38	3.55	+ 0.68	2.85	0.0	6	22	0	9	e.	John F. Park.
Farmerville	Union	177	20	65.9	+ 2.5	91	1	25	29	46[d]	2.30	− 0.43	1.10	0.0	4	21	4	6	n.	W. P. Chandler.
Ferriday	Concordia	.....	3	67.0	.....	92	2	23	29	41	1.85	.....	0.95	0.0	5	26	1	4	n.	R. Z. Sclater.
Franklin	St. Mary	10	18	70.4	+ 1.7	91	2†	34	30†	41	5.20	+ 2.13	1.32	0.0	10	14	4	13	n.	Miss Josephine M. Bonney.
Grand Cane	De Soto	302	4	66.4	.....	97	11	25	30	48[a]	1.35	.....	0.60	0.0	5	15	0	16	s.	Charles M. Huson.
Grand Coteau	St. Landry	93	23	70.6	+ 3.2	94	1	31	29	40[a]	2.59	− 0.51	1.70	0.0	7	17	11	3	so.	St. Charles College.
Hammond	Tangipahoa	44	15	69.0	+ 1.8	94	18	28	30	42	3.01	+ 0.15	0.71	0.0	7	22	5	4	se.	C. C. Carr.
Houma	Terrebonne	.....	19	70.5	+ 2.7	92	12	30	30	39	4.75	+ 1.87	1.10	0.0	6	18	0	13	ne.	Prof. H. M. Foote.
Jena	Catahoula	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. S. Harrell.
Jennings	Calcasieu	30	12	69.2	+ 0.6	92	1†	30	29†	39	4.05	+ 0.18	2.17	0.0	7	11	12	8	n.	J. F. Buch.
Lafayette	Lafayette	36	21	68.6	+ 0.8	91	1	30	29	37	3.07	+ 0.08	1.13	0.0	7	14	5	12	n.	J. J. Davidson.
Lake Charles	Calcasieu	22	22	.....	.....	.....	.....	.....	.....	.....	6.83	+ 3.31	2.15	0.0	6	19	0	12	n.	A. O. Boudreaux.
Lakeside	Cameron	.....	9	71.4	+ 2.9	92	2†	35	29†	33	5.35	.....	1.70	0.0	5	21	6	4	ne.	Miss L. T. Nunemacher.
Lawrence	Plaquemines	6	18	71.4	+ 1.1	91	4	37	29	29	4.16	+ 1.26	1.26	0.0	10	19	4	8	n.	H. C. Warmoth.
Leesville	Vernon	.....	2	70.5	.....	96	1	25	29	49	1.04	.....	0.45	0.0	6	22	5	4	s.	C. M. McFarland.
Liberty Hill	Bienville	.....	23	72.4	+ 6.4	100	1	24	29	48	0.87	− 2.02	0.40	0.0	4	18	7	6	s.	Dr. E. A. Crawford.
Logansport	De Soto	192	6	.....	.....	.....	.....	.....	.....	.....	1.69	.....	0.55	0.0	5	18	1	12	s.	Mrs. Bettie M. Dennis.
Melville	St. Landry	45	21	68.1	+ 0.9	93	1	25	29	45	1.62	− 1.12	0.89	0.0	7	17	4	10	ne.	Chas. B. McNeill.
Minden	Webster	194	18	65.6	+ 0.1	95	1†	22	29†	52	1.71	− 0.86	0.60	0.0	6	16	5	10	n.	Miss Ethel Fort.
Monroe	Ouachita	82	22	69.5	+ 3.6	97	1	29	29	43	2.70	+ 0.23	1.52	0.0	5	22	0	9	s.	Kenneth F. Stiles.
Morgan City	St. Mary	14	5	.....	.....	.....	.....	.....	.....	.....	3.45	.....	1.11	0.0	9	11	10	10	ne.	Virgil E. Kinsey.
Newellton	Tensas	.....	3	65.3	.....	89	1†	25	28	40	2.55	.....	0.84	0.0	7	18	8	5	n.	John D. Fultz.
New Iberia	Iberia	15	20	66.8	− 2.0	88	1†	35	29	30[b]	3.05	+ 0.30	1.85	0.0	3	17	6	8	se.	Mrs. Jno. A. Gebert.
New Orleans (1)	Orleans	51	40	71.5	+ 2.0	88	3	40	29	20	2.09	− 0.84	0.97	0.0	9	14	9	8	n.	U. S. Weather Bureau.
New Orleans (2)	....do	18	21	71.8	+ 3.3	93	4	35	30	33	2.33	− 0.13	0.89	0.0	11	¢	5	17	ne.	Sugar Exp. Station.
Opelousas	St. Landry	83	18	68.6	+ 1.1	93	13	26	29	45	2.18	−0.59	0.92	0.0	7	15	5	11	n.	Andrew Moresi.
Paradis	St. Charles	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Louisiana Meadows Co.
Plain Dealing	Bossier	268	18	67.0	+ 1.8	98	14	24	29	47	2.07	− 0.80	0.96	0.0	5	22	5	4	se.	Leon Sanders.
Rayne	Acadia	44	18	70.0	+ 1.4	91	1†	32	30	40	3.11	+ 0.34	1.20	0.0	7	17	2	12	n.	A. P. McNeil.
Reserve§	St. John Baptist	.....	8	73.5	.....	96	2	42	23†	36[b]	1.93	.....	0.86	0.0	5	15	11	5	.....	Leon Godchaux Co., Ltd.
Robeline	Natchitoches	147	13	67.0	+ 3.0	94	2	24	29†	49	4.37	+ 1.90	2.40	0.0	4	16	4	11	e.	Miss Ruby McCook.
Ruston	Lincoln	312	13	70.2	+ 4.0	98	2†	25	29	58[a]	0.90	− 1.86	0.50	0.0	2	26	4	1	ne.	J. C. H. McKinney.
St. Francisville	West Feliciana	115	6	68.8	.....	89	1	30	29	32	2.87	.....	2.75	0.0	3	26	2	3	n.	L. P. Kilbourne.
Schriever	Terrebonne	17	17	70.6	+ 2.2	93	1	31	30	48	4.03	+ 1.12	1.28	0.0	7	19	3	9	e.	Chas. V. Moore.
Sheridan	Washington	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.17	.....	1.80	0.0	.....	.....	.....	.....	.....	D. A. Self.
Shreveport	Caddo	249	39	67.4	+ 1.8	91	1	32	29	33	2.40	− 0.78	1.69	0.0	7	19	3	4	se.	U. S. Weather Bureau.
Simmesport	Avoyelles	.....	5	.....	.....	.....	.....	.....	.....	.....	2.34	.....	1.40	0.0	6	5	9	17	n.	C. T. Leigh.
Southern Univ. Farm	Jefferson	.....	15	.....	.....	.....	.....	.....	.....	.....	3.01	+ 0.76	1.20	0.0	10	12	5	14	se.	F. L. St. Martin.
Sugartown	Calcasieu	.....	17	68.8	+ 0.5	92	4	21	29	45	7.00	+ 4.27	5.07	0.0	4	6	24	1	.....	G. W. Richardson.
Tallulah	Madison	91	2	61.6	.....	90	14†	21	29	0[e]	3.96	.....	3.30	0.0	4	.....	.....	.....	.....	C. E. Speed.
Walker	Livingston	.....	....	71.4	.....	94	1	32	28†	49	3.10	.....	1.80	0.0	4	16	6	9	se.	H. C. Fondren.

[a], [c], [e], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
) Estimated by observer.
|| Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 7, Lower Mississippi Valley.*

Stations.	River basins.	Day of month.																														Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado.																																	
Blaine	Cimarron																																
Buena Vista	Arkansas														.08			.01	.02	T.													0.11
Calhan	Big Sandy		T.	.03											T.			.01		T.	T.							T.					0.04
Canyon City‖	Arkansas															.08		T.		.09	.11						T.	T.					0.28
Colorado Springs	Fountain		.06												T.		.06		T.	T.	T.						T.						0.12
Cripple Creek	Oil Creek				T.										.12		.55		.90									.02					1.59
Cuchara Camps	Cucharas			.24	.50												.14		.46	1.65	.47							.16					3.62
Eads	Big Sandy																																
Fairview	St. Charles																																
Florence	Arkansas																																
Fremont	Fountain		.07			T.	T.							.19			.31		.09	.18								.02					0.86
Garfield	Little Arkansas		.13												.05		.32		.32	.81	.39												2.02
Glen Eyrie	Fountain																																0.00
Hamps	Big Sandy																			T.													T.
Hermit Lake	Grape Creek																																
Hoehne (near)	Purgatoire			.10														.20	T.	.21	.15							T.					0.66
Holly	Arkansas																																0.00
Lake Moraine	Fountain		.15			.16									.28		.40		.25	.20	.18												1.62
Lamar	Arkansas																																0.00
Las Animas	...do		.42																														0.42
La Veta Pass	Cucharas																		.10	2.23	.24												2.57
Leadville	Arkansas		.02			T.									.03	.03	.59	.01	T.	.26	.04												0.98
Limon (near)	Big Sandy			T.																													T.
Madrid	Purgatoire																																1.06
Marshall Pass	Arkansas		T.												T.	T.	T.		26	.55	.25												0.36
North Lake	Purgatoire		.07															.12		.14		.10											1.52
Pueblo	Arkansas		.03												T.		T.	.15	.48	.55	.27												0.06
Rockyford (near)	...do			T.															T.	.03								T.					T.
St. Elmo	Chalk Creek		.11												T.	.08	.16	.53	.03	.30	.30												1.51
Salida‖	Arkansas															T.		.30		T.	.60												0.90
Sheridan Lake	...do																																0.00
Stonewall	Purgatoire			T.							T.							.30	.32	.58	.13												1.33
Trinidad	...do																.23		.30	.45	.43						T.						1.41
Victor	Oil Creek														.61			.40	T.	.12								T.					1.13
Vilas	Cimarron		T.																														T.
Westcliffe	Grape Creek																.03	.32			.78												1.13
Winfield	Clear Creek		.07												.19	.04	.83	.18	.05	.09	.01												1.46
Wortman	Arkansas	T.	T.											T.	.20	.31	.35	T.															0.86
New Mexico.																																	
Abbott	Canadian																.10		.56		.03												0.69
Albert	...do																.11		.75	T.													0.86
Arch (near)	Red									.48											.20												0.68
Aurora	Canadian		.02															.50	.04	.27	.14												1.06
Bell Ranch	...do																.03		.35	.06													0.44
Black Lake	...do																	.40	.11	.20	.07												0.78
Cabeza	...do																	.10		.10													0.20
Campana	...do									T.	.03							T.	T.	.15	T.												0.18
Chacon	...do																	*	.89														0.89
Cimarron (near)	...do																	.23	1.37	.06													1.66
Clayton	...do																																
Clovis	Red																																
Cuervo	Canadian										.02									.30	.05												0.37
Dawson	...do																	.25		.68													0.93
Dorsey (near)	...do																.18				.25												0.43
Elizabethtown	...do																.30	.18	.55														1.03
Folsom	Cimarron																	.13		.27	.20							.03					0.63
Fort Union	Canadian										.10							.20		.17													0.47
Hayden	...do																																
Johnsons Park	...do																.40			T.													0.40
Kappus	...do																											.04					0.04
Lake Alice	...do																.41		.35	.25													1.01
Logan	...do										.08										.16												0.24
Los Alamos	...do																	.50	.72		.08												1.30
Lykins (near)	Red									.48										.20	.05												0.73
Maxwell (near)	Canadian																.14		.60														0.74
Melrose	Red										.42									.14	.08												0.64
Miami Ranch	Canadian																.30		1.03		.14												1.47
Montoya	...do																			.41	.13												0.54
Mount Dora	...do																	.03			.10												0.13
Nara Visa	...do		T.								T.							.01	T.	.04	.08												0.13
Optimo (near)	...do																																
Pasamonte	...do																			T.	T.												T.
Raton	...do			T.														.42		.04													0.46
Rociada	...do																																
Rosebud	...do																																
Roy	...do																	.22	.70	T.													0.92
San Jon	...do		T.								.10									.04	.09												0.23
Solano (1)	...do																	.17		.71	.03												0.91
Springer	...do																	.10		*	.10												0.20
Taylor	...do																.40		.50	.40	.05												1.35
Trementina	...do																	.15		.75	.05												0.95
Tucumcari(1)	...do		T.																	.30	.07												0.45
Valley	Cimarron										.08																						
Vermejo Park	Canadian																			T.	.08												0.08
Wagon Mound (near)	...do								T.									.28		.98	.09												1.27
Texas.																																	
Amarillo	Canadian										.02									.06	.18												0.26
Archer City	Red										.53	.16								.50	.73												1.92
Arthur City‖	...do																					.40											0.40
Bonham	...do																																
Canadian	Canadian		.37								.01								1.30		.11												1.79
Childress	Red																																
Chillicothe	...do		.80																		.50												1.30
Clarendon	...do										.08								.19		.14												0.41
Clarksville	...do												.41								19												0.60
Claude	...do																				.02												0.02
Dalhart‖	Canadian																																0.00
Denison‖	Red	.10			T.							T.	.02								.72	T.											0.84
Finley ‖	...do			.34	.14	.50						.32																					1.30
Henrietta‖	...do			T.								.19								1.35													1.54
Hereford	...do																																
Lewis Ferry ‖	...do					T.							1.50																				1.50
Memphis	...do										T.	.41									.25												0.66
Miami	Canadian		.03								T.								1.98		.11												2.12

TABLE 2.—*Daily precipitation for October, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																															
Mobeetie	Red											.21								T.	.12										0.33
Nazareth	....do																														
Ochiltree	Canadian																														
Pampa	....do																	.75			.15										0.90
Paris	Red	T.			.01	.22	.01						.01								.36	.02					.04				0.67
Plemons	Canadian											T.									.03										0.03
Quanah	Red			.35																	T.	T.									0.35
Ringo Crossing	....do	.70				.34							.10																		1.14
Romero	Canadian											T.							T.	T.	.04										0.04
Sherman	Red					T.							.11								.63										0.74
Sulphur Springs	....do																														
Texline	Canadian																	T.		T.	.25										0.25
Tulia	Red											.04						.46	T.		.20										0.70
Winfield	....do			.13	.08								.29								.18										0.68
Kansas.																															
Alden	Arkansas																	.22													0.22
Anthony	....do			T.								.01	T.						.05		T.										0.06
Ashland	Cimarron																		.19	T.	.06	T.									0.25
Burlington	Neosho			.54																											0.54
Chanute	....do			1.30																	.16										1.46
Cimarron	Cimarron		T.	T.		T.												1.15			.10										1.25
Coldwater	....do		T																1.26		.05										1.31
Columbus	Neosho			1.30		T.							.15								.01	.70	.22				.32				2.70
Coolidge	Arkansas																														
Cottonwood Falls	Neosho			.80															.30	.04	T.										1.14
Council Grove	....do			.50																							T.				0.50
Cunningham	Arkansas			T.		T.													30												0.30
Dodge City	....do		.08															.16			.10										0.34
El Dorado	....do			.23									T.						.06	.04											0.33
Ellinwood	....do					T.							T.						.15		T.										0.15
Emporia	Neosho			.63															T.	.27											0.90
Eureka	Verdegris			.45		T.							T.							T.	T.										0.45
Fall River	....do			1.00																											1.00
Fargo	Cimarron																														
Fredonia	Virdigris			1.30		T.	T.						T.	T.						T.	.12	T.					.05					1.47
Garden City	Arkansas					T.												T.			T.										T.
Great Bend	....do																														
Greensburg	....do																		.35		.08										0.43
Grenola	Verdigris			.62									.15						T.												0.77
Howard	....do			.90									.04							T.							T.				0.94
Hugoton	Cimarron																				.07										0.07
Hutchinson	Arkansas			.09		T.													.08												0.17
Independence	Verdigris			1.15									.02	T.						.01	.14	.10						.08			1.50
Iola	Neosho			1.10		.01														T.	.03						T.				1.14
Irene	Arkansas																	T.		T.	T.										T.
Jetmore	....do		T.	T.										T.					.92		.06										0.98
Kingman	....do			.28									T.						.12												0.40
La Crosse	....do		T.			T.													.13		T.										0.13
Lakin	....do																	T.			T.										T.
Larned	....do																		.70												0.70
Lebo	Neosho			.35		T.													T.	T.	T.										0.35
Le Roy	....do			.22	.40		T.															T.										0.62
Liberal	Cimarron											T.	T.		T.				T.		.11										0.11
Macksville	Arkansas			.06		T.													.36		T.	T.									0.42
McPherson	....do																		.70												0.70
Madison	Verdigris			.32		T.														T.	T.										0.32
Marion	Neosho			.54	.01								.03						.20		T.										0.78
Medicine Lodge	Arkansas		.25			T.													.24		T.										0.49
Medora	....do																														
Mount Hope	....do			.13															.31												0.44
Neosho Rapids	Neosho			.25	.25																										0.50
Ness City	Arkansas																														
Newton	....do			.12															.28												0.40
Norwich	....do			.12									T.						.43												0.55
Oswego	Neosho			2.54									.03								.34	.14					.24				3.29
Plains	Cimarron		.08															1.00		.10											1.18
Pratt	Arkansas																														
Rome	....do			.05									.10						T.		T.										0.15
Sedan	Verdigris			1.19									.14	T.						.12	.06						.02				1.54
Toronto	....do			.81																											0.81
Ulysses	Cimarron																	T.			.05										0.05
Walnut	Neosho			1.30	.20	T.								T.							.10	.11					T.	T.			1.71
Wichita	Arkansas		.01	.07		T.													.44		T.										0.52
Winfield	....do			.17										T.					T.	T.	T.										0.17
Yates Center	Verdigris			.78		T.							T.	T.						T.											0.78
Oklahoma.																															
Ada	Canadian			.40			.17														.97	.10									1.64
Alva	Arkansas																		.10												0.10
Apache	Red			.54	T.							.04	.04		T.					.21	.54	.03									1.40
Arapaho	Washita			.34																	.20										0.54
Ardmore	Red	T.			T.															.15	.95	.05									1.15
Bartlesville	Arkansas			2.15									.01									.20	.25								2.61
Beaver	Canadian																	.20	.07		.20	T.									0.47
Blackburn	Arkansas			1.21									.35								.28	.20									2.04
Cache	Red			.75									.40							.22	.40	.05									1.82
Calvin	Canadian			T.									.02	.08							.78	.12					.06				1.15
Chandler	....do																														
Chattanooga	Red			.87								.08								.54	.60										2.09
Chickasha	Washita																														
Cloud Chief	....do			.45								T.								T.	.18										0.63
Dacoma	Cimarron											T.							.13		T.										0.13
Durant	Red	T.			T.	.02							T.	T.							.6	.01									0.72
Eldorado	....do		.59	.03								T.																			0.62
El Reno	Canadian																														
Enid	Cimarron			.42	.02								.07		.24							.08										0.83
Erick	Red		T.																.04	T.	.25										0.29
Fairland	Arkansas			.39	.24	.42							.41							12	.77							.44			2.79
Fort Gibson	....do				.35	T.	.10							.36						.07	1.08	.15						.11			2.22
Frederick	Red			.78								.02	.14							.37	.43	.01									1.75
Gage	Canadian		.55	.12															.25		.15										1.07
Goodwell	....do																				.02										0.02
Guthrie	Cimarron			.45																.05	.30										0.80
Guymon	Canadian																														
Harrington	Red																		.33		.12										0.45

TABLE 2.—*Daily precipitation for October, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oklahoma—Cont'd.																																	
Hartshorne	Canadian			.15	.20		.06						.33								1.10	.07											1.91
Healdton	Red			T.									T.							.07	.96											1.03
Helena	Cimarron																				.02												0.02
Hennessey	do				.55																.20	.15											0.90
Hobart	Red			.87								T.	T.							T.	.24												1.11
Holdenville	Canadian												T.								.91	.15											1.06
Hooker	do											T.						T.			.02												0.02
Hurley	do																	.05			.02												0.07
Idabel	Red																																
Jefferson	Arkansas											.08																					0.08
Kenton	Cimarron																	T.		.03		T.											0.03
Kingfisher	do			.26								T.								.10	.26												0.72
McAlester	Canadian			.31		.02							1.55							1.51	.10												3.49
McComb	do																																
Mangum	Red			.47									.03						T.		.10	.25	.02										0.87
Marlow	Washita			1.15																	1.72	.55											3.42
Meeker	Canadian			.80																	.80	.25											1.85
Muskogee	Arkansas			.35		.10							.22								1.10												1.77
Mutual	Canadian																		.16	.15													0.31
Neola	Washita			.34								.31										.44											1.09
Newkirk	Arkansas												.14																				0.14
Norman	Canadian																																
Oakwood	do		.08									T.									.24												0.32
Okeene	Cimarron			.46								T.									.27												0.73
Oklahoma	Canadian		.17	.60								.01	.01							.34	.18												1.31
Okmulgee	do			1.00																	.79												1.79
Pauls Valley	do																																
Pawhuska	Arkansas			1.72									.51								.16	.23											2.62
Perry	do			1.20									.11								T.	.26											1.57
Ravia	Washita																					.93											0.93
Sac and Fox Agency	Canadian			.80									T.								.85	.12											1.77
Shawnee	do			.80	.02	T.														16	1.31	.16											2.45
Snyder	Red			.45																22	.26												0.93
Stillwater	Cimarron			.66	.03								.09								.29	.26											1.33
Supply	Canadian																																
Tulsa (1)	Arkansas			.25	1.25																.70	.35											2.25
Vinita	do			.80		T.							.20							T.	.80							.18					1.98
Wagoner	do			.75									.19							.22	.73	.02						.10					2.01
Waukomis	Cimarron			.60								T.	.05						.18			.12											0.95
Waurika	Red			T.								T.	T.							.28	.78												1.06
Weatherford	Canadian			.57									.03									.23											0.83
Webbers Falls	Arkansas				1.50		1.90							2.00							.22	.88											6.50
Whiteagle	do			1.40																													1.40
Woodward	Canadian		.02	.02															.10		.22	.02											0.38
Missouri.																																	
Belle	Meramec				1.20	1.80	.50																										3.50
Birchtree	Black				2.00	2.46	.20																										4.66
Cape Girardeau	Mississippi																																
Caruthersville	do			.11	4.15	3.10	3.00							.17	.57							.26								T.	T.			11.36
Dean	Neosho			.65		1.45							.29								.62	.14								.28			3.43
Doniphan	Black			T.	2.01	4.33	.93							.10	.03					T.	.40									T.	T.			7.80
Farmingham	Mississippi																																
Gano	Meramec				1.60	2.15	.38															.20							.10	T.				4.43
Goodland	Black				2.00		2.05															.29								T.				4.34
Greenville	Mississippi																																
Hollister	White																																
Ironton	Mississippi				1.65	.85	2.30														.05	.25							.02		T.			5.12
Jackson	do			3.52		3.16	.90														.40													7.98
Joplin	Neosho			.30		.10							.70								.40	.10							.40					2.00
Koshkonong	Black			.25	1.35	1.43	.60							.34								.21							.15					4.33
Lamar	Neosho			T.	.20		.37							.02							.47	.33							.12					1.51
Marble Hill	Mississippi			.43	2.40	3.20	1.05														.45													7.53
Mountaingrove	White			.32	.94	1.41	.31							.21															.38					3.57
Mount Vernon	Neosho			.59	T.	1.47						.10							.04	.38	.16								.28					3.02
Neosho	do			.54		.70	.06					.33	.03						.05	.51	.26								.41					2.89
New Madrid	Mississippi				5.20	1.83	6.24	.11							.21	.02					.15	.04							.20					14.03
Oakfield	Meramec			.59	.38	2.22	.50													T.	.15								.07	T				3.91
Olden	White				2.42	1.90																								T.				4.32
Perryville	Mississippi				2.80	2.00	.95														.40													6.15
Rolla	Meramec			.63	.44	.86	.22													.03	.12								.05	T.				2.35
Sikeston	Mississippi			.11	5.50	4.00	1.90								.16						.25						.10							12.02
Springfield	White			.46		1.78							.08	.01						.01	.42	.05						.27						3.08
Steelville	Meramec				1.48	1.35	.29															.19								T				3.31
Kentucky.																																	
Blandville	Mississippi			.30	4.23	4.29	1.78							.04	.02						.23								.26	T.				11.15
Lynnville	do			T.	1.32	*	5.50							.09	.03						.16									T.				7.10
Tennessee.																																	
Arlington	Mississippi				.78	T.	3.20	T.						.72	1.20						T.	.25							.25	T.				6.42
Bolivar	do					.24	2.90	.21							.78	.10					.02	.04							.12	T.				4.41
Brownsville	do				.25	.19	6.00	.98						.29	.57	T.	.15					.20							.15	T.				8.78
Covington	do				.75	.08	8.35	.10						.21	.78						.05	.10							.05	T.				10.47
Dyersburg	do				.67	1.00	6.20							.30	.90	.10					T.									T.				9.17
Jackson	do				.50	3.10	.05							.38	.04						.04								.14	T.				4.25
Kenton	do			.47	1.36	1.50	4.90							.20	.21						.14								.05	T				8.83
Memphis	do			.55	.01	3.65	.52							1.60	.02						.15							T.	.35	T.				6.85
Milan	do				.01	.41	5.25	.10						.04	.45	.52					.02	.18							.05		T.			7.03
Trenton	do			T.	.30	2.00	4.00							.42	.28						.22								T.	T.				7.22
Union City	do				1.87	2.25	2.27	.12						.25							.17									T.				6.93
Arkansas.																																	
Alicia	White			.20	2.25	4.95								.95													T.							8.35
Amity	Ouachita			.22	.61	.20	.60						.11	.08							.02	.04							.36					2.24
Arkadelphia (near)	do			.53	.83	1.10	.53						1.45	.36							T.	.43							.56					5.79
Arkansas City	Mississippi			.32	.14	1.10							.38	.12	.40						.12								1.02					3.60
Batesville (2)	White			1.34	1.38	4.32							.16	.22							.24	T.							.10					7.76
Bee Branch	Arkansas				.50	8.50	2.50							.25	T.						T.	.10												11.85
Benton	Ouachita			1.93		1.40						1.00	1.28								.45								.55					6.61
Bentonville	Arkansas			.59		.35						.54							.14	.58	.02						.20							2.42
Bergman	White				.68	.58	.77					.56																	.27					2.86
Black Rock	do			1.32	.72	2.59						.57	.05							.10														5.35
Brinkley	do				.78	.52	2.61	T.						.70	3.20	.73						.22	T.						.41					9.17
Calico Rock	do				.68	2.00	1.00					1.08	T.								T.								T.					4.76
Camden	Ouachita				.44	.34	.72						.60								.08								.10					2.28
Centerpoint	Red			.05	T.	1.25						2.05								.20							T.							3.55
Clarendon	White			.45	.15	1.10	T.					1.06	.44	1.23								.22	T.						.38					5.03

TABLE 2.—*Daily precipitation for October, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month. 1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Total.
Arkansas—Cont'd.																																	
Conway	Arkansas			.27	.83	.65	.86						.29	.72	T.						.04							.15					3.81
Corning	White			1.23	3.97	2.00	1.40							.41														.07	T.				9.08
Dardanelle	Arkansas				.12	1.32	3.44							.28								.10						.08					5.34
Dennard	White			T.	*	2.79								.76							.15							.15					3.85
Dodd City	do				1.03	1.10							1.41								.55	.14						.82					4.23
Dutton	do				1.72	2.41	.84							1.08	.18													.04					7.05
Earl	St. Francis				.32	.01	.82							.66								.12											1.97
Eldorado	Ouachita																											.23					3.80
England	Arkansas			1.10	T.	1.22							1.30								.65							.28					3 60
Eureka Springs	White			1.04	.04	.46	.03						1.10							T.	.49					.05	.03					2.69
Fayetteville	do			.47	.03	1.19							.43									.20										3.00
Fort Smith	Arkansas				T.	.20	.60							2.00						T.		.25				T.	.06	T.				6.34
Fulton	Red			.06	1.14	3.35	.65							.83								.12	.06					.24					4.94
Hardy	White				.60	T.	3.08	T.						T.	.68	.16					.01	.02						.50					3.53
Helena (2)	Mississippi			.78	.64	.59	.65						.02		.32							.26											2.70
Hot Springs	Ouachita			.20		.29	1.03						.80	.12																			7.98
Huttig	do			.70	2.80	2.70	1.00							.63	.15							.18					T.						1.93
Jonesboro	White			.40	.45	.90							T.								.62					.40						4.84
Junction	Ouachita			.40	.82								2.60								T.	.15											5.16
Lake Farm	Arkansas			.37	.09	1.41	.45						1.55	1.14							.11	.18				T.	.56						6.44
Lewisville	Red			.26	2.92	1.45	.02						.07	.88	.01						.07						.25						5.43
Little Rock	Arkansas			.04	1.03	3.52	.52							.87	T.							.30					.67						4.66
Lutherville	do				1.65	.10	1.07							.40	.02						.12	.25					.08						4.33
Malvern	Ouachita				.68	1.88	.90							.95	.89						.12	.06											16.01
Mammoth Spring	White				2.16	4.38	7.45	T.													.20						.22						1.67
Marked Tree	St. Francis				.37	.53	.17						.18								.11												3.02
Mena	Ouachita				1.60	.60							.41																				
Mossville	White																																10.88
Mount Nebo	Arkansas				3.00	.20	6.00							1.14	.12							.42											6.72
Newport (1)	White			1.00	.33	2.23							2.56							.27						33		.70					5.37
Ozark	Arkansas				1.41	.08	.63							2.30	.10							.15											7.40
Pine Bluff	do				.13	2.23	2.14	1.35						1.20								.35											2.47
Pocahontas	White				.70			.17					.57							T.	.71	.11						.21					2.52
Pond	Arkansas					.32	.63	.80						.44								.06						.24	.03				4.37
Portland	Ouachita					.96	.35	1.03						1.71								.30						.02					4.05
Prescott	do			1.31			.61						1.39							T.	.53						.21					1.27
Rogers	Arkansas					.29	T.	.73					.04	.03								.18											
Springbank	Red																											.08					6.73
Stuttgart	Arkansas												.70								.16												3.29
Subiaco	do			.38	1.10	4.24	.07							2.45								.23											2.56
Texarkana	Red				.08	T.	.53							1.06								.17						.25					
Warren	Ouachita				.08		1.00																										2.85
Whitecliffe	Red												.21	.03							T.	.06						.65					10.08
Wiggs	Ouachita			.20	.36	.80	.54							.58	.40							.20	.04					.34					
Wynne	St. Francis				2.02	1.89	4.60	.01																									3.44
Mississippi																																	
Anguilla	Yazoo		T.	.34	T.	.10	1.38						.08	.68	.05						.21							.60					9.65
Austin	do			.23	.70	.16	3.98							1.19	1.50						T.	1.59						.30					3.15
Batesville	do			.10	.30	.03	1.65	.02							.35								.02					.68					4.95
Big Creek	do				.22	.03	2.23						.05	1.82								.15						.45					3.88
Byhalie	do				.40		1.45							1.60	T.							.10						.33					4.12
Canton	Big Black				.04	.06	2.91						.90	.06									.01					.14					4.00
Charleston	Yazoo		T.	T.	T.	T.	2.05							1.05	T.						T.	T.						.90					3.88
Clarksdale	do		.19		.50	.07	1.32	T.						.24	.28	.34	.02					T.						.63	.10				4.67
Coffeeville	do			T.	.13	.06	2.50							1.38	.13													.47					4.65
Corinth	Mississippi				.74	.17	2.34	.36						T.	.50						T.	.12						.50	.04	T.			3.29
Crenshaw	Yazoo			.35	.23	.03	1.72		T.					.16	.40	.01						.15						.27					5.05
Denmark	do				.13	.53	2.67							.50	.77							.15						.30					6.30
Duck Hill	do			.10	T.	T.	.24		3.70					.30	1.00							.16						.80					3.96
Edwards	Big Black		.20		.10	.20	2.85						.18	.35								.08											3.48
Enid	Yazoo			T.	.06	.24	1.75							.70	.05							.11						.57					3.62
Fayette	Mississippi		.31				2.15						1.06	.10								.02						T.					4.46
Greenville	Yazoo				.74	.07	.96	.01						1.15	.11	.41						.02						.88	.11				5.22
Greenwood	do			.12	.01	.08	2.60	.18						1.11	.10	.06						.02	.08					.64	.22				3.50
Grenada	do			.02			2.01						T.	.72	.25					T.			T.										3.50
Hernando	do				.65		1.25	.10						T.	.78							.12	.08					.25					3.23
Hickory Flat	do				.10	.07	1.75							.56	.35							.10						.48					3.41
Holly Springs	do				.01	.02	1.30	.18							.69							.02	.02					.17	.01				2.42
Kosciusko	Big Black			.19	.01	.06	1.70	.73	.01					.30	.48							.02	.01						.66				4.17
Lake Coromrant	Yazoo		T.	.78	.50	2.93								.98	.33						T.	.15						.25					5.94
Lula	do	*	*	*	*	*	*	*	*	2.49				.26	1.04							.18						.42					4.39
Malone	do		T.	T.	.56	.25	1.98							.38	T.							.09						.52					3.78
Marks	do			.19	.32	.10	1.58							.12	.14	.01						.04						.78					3.28
Natchez	Mississippi			.46	.33	.13	.76	.24		T.	T.		.61	T.									T.					.08					2.61
New Albany	Yazoo					.17	2.00							1.00	.31						.10						.49					4.07
Pontotoc	do					2.00	.14							.25							.35						.27					3.01
Port Gibson	Mississippi			.24	.10	.03	1.94	.44		T.	T.		.18	.21							T.							.90	.04				3.14
Rosedale	Yazoo				.95	.05	1.10								.02	.50	2.00	.12			.30	.04						.27					6.02
Senatobia	do		.01	.32	.32	.01	1.50							1.13	.44	.01					T.	.11						.20					4.18
Shoccoe	Big Black				T.	T.	2.50		T.				1.29	.42								T.						.02					4.41
Suffolk	Mississippi		1.51	T.	T.	.04	2.37						.29	.08							T.	T.						.44					4.31
Swan Lake	Yazoo						2.00								.45		.20					.35						.30					3.09
Tchula	do		T.	T.	T.	T.	2.00							T.	3.25	T.	T.					T.						.42					5.90
University	do			T.	.05	.35	2.22								.41	.14												.04					3.59
Utica	Mississippi		T.			.45	1.92						T.	.06	.05							.01						.11					2.52
Vicksburg	do		.13	.02	.82	.12	1.60		T.	T.			T.	.14		T.						.10						.45					2.95
Water Valley	Yazoo			.10	T.	2.00	.40							.10	.30	1.10																	4.55
Woodville	Mississippi			.05	.10	.02	1.46						.16																				1.79
Yazoo City	Yazoo					T.	.06	2.34						3.74															12				6.46
Louisiana.																												.15					3.47
Abbeville	Coast			.02	.35	.91	1.70	.15				.15	.04																					5.60
Alexandria	Red			.15	.15	1.48	1.63	.45						1.74																				3.75
Amite	Coast			.27	T.	.98	.20	.80		.15			T.	.42		T.							T.						.93					2.52
Baton Rouge	do			.40		.15	.22	1.45					.05	.20															.05					3.03
Burnside	do		.40	.07	.28	.22	1.47						.20	.01														.38					3.10
Burrwood	do	.14	.52	.20		.06	.80	.60	T.	.03					.09													.66					3.33
Cades	do		.10		.23	.25	.75						2.00																					1.89
Calhoun	Ouachita			.04	T.		1.35							.50																				3.91
Cameron	Coast			.98	T.	1.78	1.15																											3.36
Cheneyville	Red			.06	.15	.50	.80	1.40						.45															T.					3.32
Clinton	Coast		T.	T.	.35	.20	2.51		.02				.07	.17	T.																			
Collinston	Ouachita																												.02					5.03
Covington	Coast			.50	.13	.07	1.18	.74	T	T.	.03	.51	.16	1.69	T.													.48					2.32
Dodson	Red			.32	T.	T.	1.52																											

TABLE 2.—*Daily precipitation for October, 1910. District No. 7*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Louisiana—Cont'd.																																	
Donaldsonville‖	Coast			.25		.15	.15	2.85				.05	.10																T.				3.55
Farmerville‖	Ouachita				1.10	.90							.05								.25											2.30
Ferriday	do			.95	.05	.10	.55					.20																				1.85
Franklin‖	Coast		T.	.01	.55	.24	.64	1.32		.01	T.	.75	.60	.15	T.								T.						.93				5.20
Grand Cane‖	Red				.20		.60						.40	.10								.05											1.35
Grand Coteau	Coast		.18	.12	.15	.35	1.70			T.	.02	.07																					2.59
Hammond	do		.42	.15	.26	.65	.71				T.		.42															.40					3.01
Houma‖	do			.50	.90	.90	1.10							.75														.60					4.75
Jena	Red																																
Jennings‖	Coast			.19	.20	.64	.59	.26				1.06	1.11																				4.05
Lafayette‖	do			.22		.58	.82	.08				.06	1.13															T.	.18				3.07
Lake Charles‖	do		.38		1.04	.54	1.37						1.35	2.15																			6.83
Lakeside	do			.60	1.50	1.70	.65					.90																					5.35
Lawrence‖	do		.86	.25	.39	.13	.50	1.26	.09			.08	.02																.58				4.16
Leesville	Sabine			.05	.43	.42	.03						.01									.10											1.04
Liberty Hill	Red					.20	.40						.07								.20												0.87
Logansport‖	Sabine				.30	.31	.38						.55									.15											1.69
Melville‖	Red			.03	.12	.37	.68	.21				.18	.03																T.				1.62
Minden‖	do				.40	.36	.60						.06	.09								.20											1.71
Monroe‖	Ouachita			.18	.04		1.50	.02			T.			.96																			2.70
Morgan City‖	Coast			.14	.26	.31	.79	1.11				.70	.06	.05															.03				3.45
Newellton	Mississippi		.27	.16	.84	.60	.10		T.			.37	.21																				2.55
New Iberia	Coast		T.	T.	T.	.40	1.85					.80																T.					3.05
New Orleans (1)	do	T.	.28	.31	T.	.62	.64	.01		T.	.04	.07	.02	T.	T.							T.						.10					2.09
New Orleans (2)	do		.89	.21	.01	.06	.56			.04	.08	.01	.21	.02														.24					2.33
New Orleans (3)	do		.33	.12		.16	.44	.02		.01	.01		.77															.03					1.89
New Orleans (4)	do		.84	.22		.08	.48			.02	.08		.22	.01	.01													.18					2.14
New Orleans (5)	do		.55	.43	.01	.03	.60	.01	.01	.02	.10	.66	.08	.02	.10													.53					3.15
New Orleans (6)	do		.28	.32		.46	.69				.03	.08	.01															.09					1.96
New Orleans (7)	do		.36	.30		.39	.68	.01				.02	.12															.34					2.22
New Orleans (8)	do		.60	.15		.90	.74				.06	.05																.18					2.68
Opelousas‖	do	.47		.27	.10	.32	.68	.24				.10	T.																				2.18
Paradis	do																																
Plain Dealing	Red			.76	.13	.96	.12																										2.07
Rayne‖	Coast	.25	T.		.04	1.20	1.05	.10				.12	.35								T.							T.					3.11
Reserve‖	do				.24		.54	.24	.86							.11							.10										1.99
Robeline‖	Red				.72	T.	.25						2.75	.65								T.											4.37
Ruston	Ouachita			.50	.40																	T.											0.90
St. Francisville‖	Mississippi					.35	2.40						.12																				2.87
Schriever	Coast		T.	.80	T.	1.28	.58	.50				.73			.10														.04				4.03
Sheridan	Pearl		1.00		.35	.02	1.80																										3.17
Shreveport	Red			.16	.12	.18	T.					T.	1.69								.08	.12						.05					2.40
Simmesport‖	do				.07	.35	.40	1.10					.42									.01	T.						T.				2.34
Southern Univ Farm	Coast		.26	.30	.20	.10	1.20	T.	T.		.05	.10	.70	.08														.02					3.01
Sugartown	do		.38	1.55	.54	4.53																											7.00
Tallulah	Mississippi				.30		3.30															.18						.18					3.98
Walker‖	Coast				.50	.70	.10					1.80																					3.10

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 7, Lower Mississippi Valley.*

Date.	Colorado.						New Mexico.				Texas.				Kansas.										Oklahoma.			
	Lamar.		Leadville.		Pueblo.		Albert.		Cimarron.		Amarillo.		Paris.‡‡		Dodge City.		Ellinwood.		Iola.		Liberal.		Wichita.		Ardmore.‡‡		Bartlesville.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	92	63	63	32	87	45	87	52	82	44	89	62	96	63	92	55	95	49	90	63	93	53	93	65	98	64	96	61
2...	88	66	49	34	79	49	82	61	69	39	83	60	94	62	84	59	89	66	87	65	84	52	87	70	92	65	97	62
3...	95	40	55	20	71	37	72	49	73	32	74	50	85	64	71	49	85	54	73	58	86	48	72	55	90	68	75	60
4...	93	40	54	33	81	39	90	45	80	29	94	49	87	67	90	46	84	44	75	49	92	47	80	47	86	55	89	57
5...	71	40	48	28	65	40	79	46	65	35	66	46	93	70	67	44	81	53	70	50	74	49	70	50	95	65	85	62
6...	83	31	62	24	75	29	75	40	73	31	78	41	87	54	80	35	83	33	69	40	81	37	74	41	75	48	75	48
7...	90	36	66	33	88	36	87	45	84	29	84	45	79	45	85	45	84	46	73	41	86	42	75	46	83	44	75	41
8...	93	40	74	32	83	39	80	48	84	47	85	50	82	44	92	48	89	44	77	41	93	44	83	47	85	43	76	43
9...	92	38	71	33	88	40	90	52	84	40	85	49	85	45	85	50	86	45	79	44	89	42	81	48	86	42	79	41
10...	90	42	72	36	84	38	86	46	78	37	79	47	89	51	84	48	89	41	80	49	86	40	84	53	88	52	83	41
11...	83	59	63	34	77	43	81	44	73	36	70	55	88	56	79	45	87	47	81	48	88	45	83	54	85	54	84	46
12...	87	46	63	31	82	47	87	46	77	33	83	52	90	59	81	55	82	57	78	53	81	52	76	60	87	58	80	60
13...	89	39	61	29	82	41	87	51	79	35	90	55	94	63	81	51	82	60	81	60	87	49	77	60	96	60	85	58
14...	86	46	55	31	78	43	83	53	77	36	87	52	96	63	83	55	87	59	83	57	85	50	83	58	98	57	86	59
15...	87	42	57	29	79	44	86	45	74	39	84	53	92	64	87	54	89	50	85	55	88	48	85	59	90	64	88	58
16...	89	59	54	32	84	48	79	51	74	42	82	55	89	62	84	55	88	56	84	54	85	50	84	56	89	56	88	52
17...	80	55	36	24	68	47	71	41	64	35	80	54	91	63	80	58	84	55	83	59	83	53	81	63	87	60	88	53
18...	69	55	37	27	61	41	68	41	59	35	70	41	89	54	71	49	78	55	82	62	77	42	80	58	89	55	89	52
19...	59	42	27	9	46	32	56	31	43	32	53	35	84	59	50	38	62	43	67	43	64	43	58	42	62	55	60	52
20...	49	30	27	4	45	25	43	30	44	21	35	29	49	46	38	31	44	35	43	29	49	29	42	36	47	42	46	40
21...	71	21	42	9	64	20	70	29	61	20	66	29	63	40	68	27	74	24	60	38	70	24	66	30	63	33	63	30
22...	80	30	52	21	73	25	67	37	64	29	71	37	78	37	73	35	75	29	71	30	73	53	72	37	78	40	66	38
23...	82	27	17	24	74	32	71	39	70	25	78	36	80	37	77	42	73	38	74	39	79	31	76	44	78	37	69	45
24...	82	29	51	24	73	32	75	39	38	30	76	39	84	46	76	36	78	35	73	40	77	35	75	46	82	44	80	44
25...	82	31	55	27	80	33	75	42	77	34	81	46	89	46	83	39	87	37	76	40	86	40	84	46	87	45	82	44
26...	81	37	48	30	76	42	84	46	72	35	85	46	87	49	79	39	79	46	85	48	82	42	84	47	87	55	89	42
27...	62	33	36	11	42	26	56	34	62	31	47	32	65	51	46	27	68	35	50	32	56	35	48	33	60	47	58	44
28...	60	15	49	14	54	18	55	30	52	30	58	28	55	33	51	22	47	22	43	25	56	19	44	26	55	30	56	31
29...	80	23	51	23	78	22	71	30	72	22	71	32	63	26	72	30	71	29	57	23	74	25	65	27	66	28	64	22
30...	80	30	50	22	72	38	80	45	71	38	80	39	73	29	79	32	81	32	71	43	81	30	73	44	73	40	74	37
31...	73	33	46	21	71	34	79	41	69	40	81	41	77	36	73	37	73	37	68	42	77	33	68	48	76	44	74	43
Mns	80.6	39.3	52.3	25.2	72.9	36.3	75.9	42.5	70.1	33.6	75.6	44.8	82.4	51.1	75.5	43.1	79.4	43.7	73.2	46.2	80.1	41.4	74.3	48.3	81.1	50.0	77.4	47.6

Date.	Oklahoma.														Missouri.								Lynnville, Ky.		Jackson, Tenn.	
	Enid.‡‡		McAlester.		Mangum.‡‡		Muskogee.		Oklahoma.		Weatherford.‡‡		Woodward.		Caruthersville.		Ironton.‡‡		Lamar.‡‡		Olden.		——— Springfield.					
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	100	60	98	66	97	61	94	63	94	65	99	61	15	62	93	58	91	56	93	62	89	61	87	65	94	55	93	53
2...	93	63	93	67	93	65	93	63	88	65	91	63	90	67	94	57	87	54	89	63	85	73	92	55	96	57	91	55
3...	75	66	85	72	77	60	87	65	72	58	78	63	75	55	90	64	81	63	89	67	75	63	73	62	85	67	88	63
4...	85	49	89	64	87	54	85	63	82	53	85	53	86	40	74	65	77	63	82	62	81	62	80	63	80	67	86	71
5...	75	51	93	73	77	53	89	67	81	56	73	53	76	53	74	66	69	62	78	61	74	65	78	54	76	67	82	55
6...	78	43	75	50	75	44	70	45	71	45	77	45	81	31	68	53	67	49	69	43	62	48	82	46	67	53	66	55
7...	83	41	79	41	80	43	77	41	77	49	83	43	85	49	68	49	68	75	75	41	68	41	66	45	68	46	67	49
8...	84	41	82	42	.....	44	79	40	79	49	90	43	92	49	72	49	73	34	78	42	73	40	71	45	75	45	72	50
9...	88	41	85	42	.....	44	85	42	80	49	84	41	85	37	78	45	78	37	80	42	79	46	75	51	81	44	77	47
10...	87	42	86	43	.....	47	84	47	82	52	86	43	85	37	75	48	74	37	80	47	75	46	74	52	76	47	75	46
11...	88	46	88	53	88	48	84	51	78	58	84	44	83	44	79	45	78	37	83	49	77	47	75	53	82	45	83	42
12...	84	48	84	60	82	62	75	59	81	63	86	56	84	55	82	46	80	39	83	51	81	50	80	55	85	46	85	42
13...	84	60	88	62	85	54	86	57	82	62	85	57	85	48	75	57	77	48	85	51	72	57	72	58	82	51	74	42
14...	87	69	88	63	89	54	88	62	84	61	87	56	85	50	80	62	81	51	85	57	79	56	78	58	80	61	81	42
15...	88	56	85	65	88	57	86	59	83	58	88	55	90	50	83	63	84	53	87	54	81	55	80	61	85	56	83	42
16...	87	55	89	59	83	55	86	58	82	58	86	53	86	48	86	55	85	48	87	54	84	56	80	61	87	62	82	49
17...	89	54	88	61	88	58	86	59	82	65	86	55	85	56	87	52	83	47	84	56	81	60	78	59	87	53	87	52
18...	86	52	89	63	82	60	88	63	84	64	86	60	77	56	90	57	84	46	85	58	81	55	80	60	88	56	88	53
19...	60	48	81	50	60	51	75	50	64	42	60	49	62	46	89	54	83	47	57	55	80	58	65	44	90	55	88	53
20...	44	41	52	43	42	40	56	42	42	36	41	39	47	35	70	54	51	46	47	39	61	43	44	38	71	54	72	56
21...	67	29	44	37	67	30	60	36	62	32	68	31	69	27	58	47	48	42	55	38	45	40	47	36	57	48	60	51
22...	76	28	74	42	75	31	73	39	71	43	80	32	75	35	70	34	65	31	70	33	66	34	63	38	58	37	68	34
23...	80	30	79	43	77	35	78	41	74	46	79	46	78	35	73	34	70	28	75	35	69	39	69	44	73	37	73	37
24...	80	35	82	50	78	44	78	45	76	48	80	43	79	38	80	37	76	35	75	35	75	45	69	47	76	36	77	35
25...	80	40	87	46	81	41	85	42	82	49	86	45	87	40	78	45	71	41	77	41	74	44	73	48	72	47	72	42
26...	85	47	83	52	90	41	86	51	84	55	90	43	87	59	85	46	81	35	83	42	80	52	78	53	81	40	83	57
27...	58	32	78	47	56	42	74	44	55	35	57	41	66	39	72	49	56	42	64	42	70	42	55	34	72	50	70	51
28...	62	28	54	34	56	27	52	32	51	28	58	27	53	20	49	32	42	30	46	27	50	29	37	28	50	30	52	28
29...	64	30	64	27	69	30	61	21	64	31	68	28	72	29	55	20	50	18	57	23	51	21	50	25	51	24	50	21
30...	76	28	72	45	76	30	73	39	70	42	75	32	75	42	65	30	66	30	72	25	66	32	66	37	61	30	63	27
31...	68	41	71	53	82	47	74	48	71	59	78	43	74	32	71	34	68	37	70	44	70	41	67	46	65	36	71	33
Mns	78.1	45.0	80.2	52.1	77.9*	46.8	78.9	49.7	75.1	50.5	79.2	46.5	79.0	44.0	76.2	48.6	72.4	42.8	75.5	46.4	72.7	48.4	69.4	49.4	75.8	48.5	76.1	46.1

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 7*—Continued.

Date.	Tennessee.				Arkansas.																Mississippi.					
	Memphis.		Union City.		Bentonville.		Corning.		Dardanelle. ‡‡		El Dorado. ‡‡		Fort Smith.		Little Rock.		Pine Bluff. ‡‡		Texarkana. ‡‡		Wynne. ‡‡		Clarksdale. ‡‡		Corinth. ‡‡		Greenville. ‡‡	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1...	87	66	92	60	89	61	92	59	95	55	93	61	:2	63	90	67	93	63	90	63	91	58	91	59	92	57	91	62
2...	90	68	90	56	86	61	90	60	92	57	91	62	89	63	87	67	90	61	89	65	90	60	91	30	91	60	91	59
3...	86	69	88	54	73	63	85	65	81	66	88	67	80	68	82	66	84	66	80	69	86	60	85	65	88	66	88	64
4...	82	72	80	67	82	64	77	66	88	64	87	62	84	66	80	69	85	70	84	70	75	67	87	66	82	72	87	67
5...	82	67	75	67	81	56	74	66	82	66	83	74	83	63	78	67	84	72	86	73	76	68	89	73	82	72	89	72
6...	67	55	69	54	66	46	67	54	73	54	74	60	71	54	70	56	75	59	76	57	68	55	66	60	66	64	68	61
7...	67	51	70	45	69	39	68	46	71	43	72	47	72	47	68	50	73	51	72	48	68	46	70	51	68	50	72	52
8...	72	49	75	50	73	38	72	44	78	41	76	44	77	45	72	48	78	48	75	47	72	44	67	50	70	50	70	50
9...	77	53	81	45	76	41	77	44	79	41	81	48	79	46	76	53	80	53	78	47	76	47	80	52	79	55	82	52
10...	76	53	79	46	76	50	75	46	79	47	83	55	78	53	75	57	82	53	81	54	76	50	80	52	78	52	82	54
11...	75	54	81	45	78	47	79	45	80	45	87	54	79	53	76	54	83	51	82	57	78	46	83	50	86	48	85	53
12...	82	57	83	45	74	53	80	47	76	55	83	67	71	60	78	60	82	60	83	58	84	47	82	50	86	52	85	55
13...	77	61	78	52	80	58	73	59	78	57	86	66	79	62	76	65	83	65	86	63	79	55	81	60	73	56	83	66
14...	74	67	81	65	78	51	76	63	79	62	91	67	79	65	80	67	84	38	88	64	75	64	79	60	82	62	84	66
15...	80	63	85	61	79	54	83	59	81	58	84	67	81	62	79	64	84	66	88	67	74	61	82	64	84	62	82	65
16...	82	62	87	56	82	52	84	54	85	58	86	64	83	62	81	66	86	64	84	65	82	56	85	62	84	60	85	65
17...	84	64	88	54	80	55	85	54	86	54	90	57	83	60	83	62	86	58	84	63	85	55	87	58	88	58	87	60
18...	85	64	87	55	82	58	86	52	86	54	89	57	84	61	85	61	89	64	85	60	85	55	87	57	86	58	87	59
19...	83	63	86	55	66	44	85	54	85	55	88	56	75	52	84	55	88	58	83	60	85	55	85	56	86	56	85	57
20...	63	55	87	53	44	39	78	52	54	53	67	56	52	44	56	48	66	56	58	55	59	55	64	57	75	57	68	58
21...	56	45	58	49	52	37	54	46	56	45	58	46	57	42	53	46	55	50	57	45	53	47	56	52	56	56	55	54
22...	66	41	68	37	66	37	68	37	73	34	72	35	70	37	70	38	73	37	74	39	68	37	70	35	67	37	54	35
23...	68	48	72	36	72	37	72	35	74	35	79	42	74	42	71	48	76	36	74	39	70	36	74	38	72	38	76	37
24...	75	52	75	38	74	46	79	39	81	37	79	43	77	45	77	49	80	43	76	50	77	39	78	42	76	40	78	43
25...	74	54	77	42	78	42	77	45	81	37	83	46	81	46	79	55	82	43	80	50	75	42	82	43	74	46	82	45
26...	79	58	81	42	79	50	82	42	85	41	85	48	83	50	79	54	85	48	82	50	82	41	84	47	80	45	83	47
27...	70	44	60	49	53	36	74	50	64	41	68	56	62	43	68	46	67	53	65	64	61	52	65	49	60	52	66	49
28...	44	34	54	33	42	26	52	33	53	35	55	35	48	33	46	37	54	35	52	36	47	33	50	36	46	34	54	39
29...	49	28	51	25	56	23	52	24	59	23	58	28	58	28	55	31	57	27	54	29	61	24	54	26	50	26	55	29
30...	61	37	62	31	67	39	64	32	70	24	68	29	70	36	64	36	66	33	66	29	61	34	64	26	58	28	65	29
31...	67	43	66	31	69	46	78	38	74	33	73	31	71	44	67	42	70	35	72	42	67	39	69	38	67	32	73	34
Mns	73.5	54.7	76.3	48.4	71.7	47.1	75.4	48.7	76.7	47.4	79.4	52.6	74.9	51.5	73.7	54.3	78.1	53.1	76.8	54.1	73.7	49.3	76.4	51.4	75.2	51.6	77.7	52.8

Date.	Mississippi.						Louisiana.																					
	Kosciusko. ‡‡		Natchez. ‡‡		Vicksburg.		Alexandria. ‡‡		Baton Rouge. ‡‡		Covington. ‡‡		Lafayette. ‡‡		Lake Charles. ‡‡		Monroe. ‡‡		New Orleans.		Robeline. ‡‡		Schriever. ‡‡		Shreveport.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1.....	91	55	91	63	88	64	94	65	92	68	93	66	91	66	.....	.....	97	63	87	74	32	62	33	65	.1	67
2.....	90	57	92	65	89	65	92	60	89	69	90	66	90	66	.....	.....	94	62	85	69	94	58	92	64	88	65
3.....	89	63	91	67	86	66	90	60	87	67	90	68	87	68	.....	.....	91	65	88	74	87	58	92	64	83	68
4.....	87	70	92	70	87	72	88	68	87	68	89	70	85	72	.....	.....	90	66	87	75	90	69	90	72	86	72
5.....	84	74	88	72	88	73	79	71	85	70	87	72	84	74	.....	.....	85	74	87	76	86	72	90	72	88	75
6.....	65	64	70	70	75	55	72	69	83	72	76	73	76	64	.....	.....	80	68	77	64	76	66	76	72	77	57
7.....	65	50	72	53	70	52	73	52	74	58	73	59	72	56	.....	.....	80	51	70	62	75	48	71	59	72	50
8.....	69	50	71	52	69	49	78	50	79	57	79	59	74	53	.....	.....	83	49	72	62	74	41	79	59	74	47
9.....	77	55	73	52	75	61	72	50	82	64	78	61	74	53	.....	.....	82	50	77	66	76	63	80	62	77	57
10.....	81	56	86	65	84	63	85	65	88	38	90	67	87	65	.....	.....	89	62	83	70	87	64	86	63	84	65
11.....	86	53	90	67	85	61	90	65	89	71	90	69	86	68	.....	.....	90	59	84	72	80	65	91	68	83	65
12.....	84	54	86	68	84	69	89	66	91	72	83	67	85	68	.....	.....	90	60	84	72	84	64	92	68	82	69
13.....	74	65	90	69	84	69	90	69	92	70	90	68	88	68	.....	.....	91	67	85	73	92	68	90	67	86	68
14.....	83	63	91	68	86	69	91	60	90	72	90	68	87	68	.....	.....	95	68	85	72	93	63	90	67	91	67
15.....	82	63	87	68	85	67	87	66	88	70	90	67	87	69	.....	.....	93	68	85	73	87	63	90	68	84	68
16.....	83	63	87	66	85	66	88	65	85	68	90	65	86	66	.....	.....	91	65	85	72	89	61	89	65	85	66
17.....	88	60	91	63	90	63	90	64	87	66	90	61	87	64	.....	.....	95	64	84	70	91	57	88	60	86	64
18.....	84	58	90	63	87	67	90	59	86	65	92	60	87	61	.....	.....	95	61	85	70	90	55	89	58	87	62
19.....	85	56	90	60	84	62	90	56	84	64	91	57	87	58	.....	.....	94	60	86	72	90	54	89	57	85	60
20.....	82	56	80	60	71	61	80	56	85	63	89	57	85	58	.....	.....	70	58	85	69	75	53	89	56	64	48
21.....	58	58	61	55	61	48	62	48	66	61	75	58	66	57	.....	.....	69	50	72	57	63	46	71	58	58	44
22.....	67	36	72	40	68	41	70	36	69	48	77	44	71	40	.....	.....	69	39	68	52	75	33	80	46	73	40
23.....	74	38	81	41	75	47	80	36	75	47	80	40	78	41	.....	.....	70	46	73	57	80	33	81	41	78	48
24.....	76	38	81	48	74	52	80	44	78	50	80	41	81	46	.....	.....	84	47	74	61	82	41	83	43	79	50
25.....	81	41	85	49	79	59	87	40	86	56	82	45	82	48	.....	.....	90	47	78	64	89	41	84	48	84	55
26.....	82	45	88	52	83	56	85	47	88	54	86	48	85	49	.....	.....	88	50	83	63	87	45	88	47	83	56
27.....	63	45	77	54	69	49	73	47	87	60	85	49	84	54	.....	.....	84	50	81	61	76	45	86	49	72	47
28.....	50	36	57	40	52	38	59	40	59	48	63	45	59	42	.....	.....	64	38	61	48	58	38	77	47	55	38
29.....	52	27	57	31	52	34	56	28	57	42	61	31	57	30	.....	.....	64	29	53	40	60	24	67	33	58	32
30.....	60	27	70	33	64	35	68	27	61	40	65	30	65	31	.....	.....	72	30	60	44	69	24	69	31	67	35
31.....	67	30	78	41	71	41	70	29	69	45	75	31	74	43	.....	.....	77	36	67	50	77	28	80	32	74	41
Means.....	76.1	51.8	81.1	53.9	77.4	57.2	80.6	53.5	81.2	61.1	82.9	56.8	80.2	57.0	.....	.....	84.1	54.9	78.4	64.6	82.2	51.7	84.3	56.8	78.5	56.3

Climatological Data for October, 1910.
DISTRICT No. 8, TEXAS AND RIO GRANDE VALLEY.

BERNARD BUNNEMEYER, District Editor.

GENERAL SUMMARY.

The weather during the greater part of the month was warm and pleasant, with an abundance of sunshine and generally deficient precipitation. Light to dense morning fogs occurred in Texas on several days between the 10th and 27th. There were but few days with precipitation, the average being about 3 in New Mexico and 4 in Colorado and Texas. Most of the precipitation occurred during the second decade, and there was no rain in by far the greater portion of the district after the 20th. The deficiency in precipitation averaged greatest in Texas notwithstanding a conspicuous excess in a large number of west-central and southwestern counties, on the immediate upper coast, and in limited portions of the lower Rio Grande Valley.

The greatest monthly precipitation in Colorado was 3.06 inches at Cumbres; in New Mexico, 2.76 inches at Swastika Ranch; and in Texas, 9.36 inches at Galveston. The least in Colorado was 0.55 inch at Saguache. There was no precipitation at Newman, N. Mex., and at Dilley and Marfa, Tex., while at three other stations in New Mexico and at four in Texas the monthly amounts were less than 0.10 inch. Excessive precipitation of 2.50 inches or more in 24 consecutive hours occurred as follows: Abilene, 3.77; Columbia, 2.71; Galveston, 6.62; and Hondo, 2.60.

Snow fell on several days in the northwestern portions of the district, the depth of fall increasing from a trace in northwestern Texas and the lower valleys of New Mexico to 36.7 inches at Harveys Upper Ranch, N. Mex. The greatest fall in Colorado was 24.5 inches at La Veta Pass. The snow disappeared rapidly, however, and only the higher peaks remained covered at the close of the month.

TEMPERATURE.

The monthly mean temperature was 2.4° above normal in Colorado, 0.3° below in New Mexico, and 0.4° above in Texas. During the greater part of the month the weather was warm, and temperatures of 90° and over were recorded on several days in the larger portion of the district. Unusually cold weather occurred from the 19th to the 22d and from the 27th to the 30th. During the former period the lowest temperatures of the month were recorded in Colorado and a large portion of New Mexico; and during the latter, in the remainder of the district. The diurnal range of temperature varied from about 10° on the upper Texas coast to about 44° in the extreme northwestern portion of the district.

The highest and lowest temperatures reported were: In Colorado, 90° at Saguache, on the 10th, and −15° at Hermit, on the 21st; in New Mexico, 95° at Newman, on the 1st, at Socorro on the 4th, and at Carrizozo on the 8th, and −1° at Tres Piedras on the 21st; and in Texas, 101° at Tilden, on the 13th and 16th, and at Grapevine on the 15th, and 22° at Carmona on the 29th. The local monthly means ranged from 43.4° to 48.6° in Colorado, from 39.1° to 62.3° in New Mexico; and from 61.0° to 75.2° in Texas.

PRECIPITATION.

The precipitation over the Rio Grande watershed was generally deficient and averaged less than during the preceding month, although it was better distributed. The average this month was 0.89 inch as against 1.23 inch in September. The higher September average was the result of torrential rains in the extreme lower valley.

The average for the Rio Pecos watershed was only 0.67 inch which is about 0.20 inch less than the average for the preceding month. The deficiency of precipitation covered the entire watershed, but was greatest over the lower reaches.

The precipitation over the Nueces, San Antonio, and Colorado watersheds exceeded the normal, but it was decidedly deficient over the remaining Texas watersheds, including the coastal plains, although heavy rains occurred on the upper coast and good rains over limited areas in the Guadalupe and Brazos watersheds. The following are the average monthly amounts in inches for the various river basins: Nueces, 2.69; San Antonio, 2.16; Guadalupe, 2.26; Lavaca, 1.46; Colorado, 2.37; Brazos, 1.95; Trinity, 1.29; Neches, 1.90; Sabine, 1.10; and coastal plains, 2.32. Compared with the rainfall for the preceding month there was a general increase, except over the Lavaca and Trinity watersheds and over the coastal plains.

RIVER CONDITIONS.

The flow of the upper Rio Grande was low during the month, and there was no water available for distribution at the Leasburg Project. The lower Rio Grande fell slowly during the entire month at Eagle Pass and at the close of the month was below normal at that place, but there was ample water for irrigation. Farther below, the river rose on the 5th, 6th, and 7th, becoming nearly bank full at Llano Grande, and then fell gradually during the remainder of the month.

At the Carlsbad Project water was delivered throughout the month, but at the Hondo Project there was not much available for irrigation.

The remaining rivers of the district continued unusually low during the month; in fact, the volumes of water discharged by them were slightly less than during September. The stages of the Guadalupe, Colorado, and Brazos rivers are the lowest on record for October.

MISCELLANEOUS.

Frosts.—Killing frosts occurred in high altitude districts of New Mexico on the 3d, and in some of the northern districts on the 6th, but a general killing frost was delayed until the morning of the 20th or 21st.

In Texas killing frosts occurred on the 21st in some northern and western localities, and from the 27th to 30th in the eastern half of the State southward nearly to the coast. In the fall of 1909 the first killing frost in Texas occurred about 10 days earlier.

Eagle Pass.—The effect of the drought was felt seriously by stockmen. Northers came earlier than usual.

Grand Saline.—This has been the driest weather known for years and water is scarce.

Hondo.—Good general rains on the 4th made stock water, started grass, and enabled oats to be planted.

Kerrville.—Crops are doing well, but rain came too late to help pastures.

Mountain View.—Many cattle have died during the month on account of the drought.

Sealy.—About all the crops have been gathered. There was no top crop of cotton on account of the dry weather.

Drainage districts.—Preliminary steps have been taken for the creation of a third drainage district in Galveston County, Tex. It is contemplated to drain about 21,000 acres on the mainland between Virginia Point and Dickinson Bayou at an estimated cost of about $50,000. Work on drainage district No. 1 will probably be completed in January, 1911. Actual work on drainage district No. 2 has not yet begun, but the drainage commissioners have been appointed and are ready for a preliminary survey, after which bonds will be issued and bids solicited for the work.

TABLE 1.—*Climatological data for October, 1910. District No. 8, Texas and Rio Grande Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Date.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Colorado.																				
Blanca	Costilla	8,403	1	43.4	.....	80	8	10	21	56	0.87	.....	0.54	1.5	6	16	13	2	sw.	L. C. Audrain.
Cumbres	Conejos	10,015	3	.....	.....	.....	.....	.....	.....	.....	3.06	.....	1.32	17.0	6	12	9	10	.....	Ida M. Lively.
Garnett	Costilla	7,576	17	45.6	+ 3.6	81	9	10	21	55	0.64	+ 0.04	0.56	2.0	2	21	5	5	.....	Chas. Speiser.
Hermit	Hinsdale	9,843	.....	.....	.....	.....	.....	−15	21	.....	.....	.....	.....	.....	.....	17	8	6	.....	Marion Mason.
La Veta Pass	Costilla	9,000	.....	.....	.....	.....	.....	.....	.....	.....	2.57	.....	2.23	24.5	3	21	6	4	e.	Norvin R. Lively.
Manassa	Conejos	7,700	4	44.0	.....	80	9	4	21	55	0.60	.....	0.45	1.5	2	.....	.....	.....	.....	J. B. Chapman.
Platoro	do	9,675	2	.....	.....	.....	.....	.....	.....	.....	2.22	.....	0.51	14.0	8	22	0	9	sw.	Walter R. Hook.
Saguache	Saguache	7,740	18	48.6	+ 3.2	90	10	10	19	56	0.55	− 0.18	0.20	0.0	3	20	1	10	w.	Eugene Williams.
San Luis	Costilla	7,794	19	45.6	+ 0.4	74	1†	14	21	49	0.93	− 0.01	0.24	0.8	4	21	10	0	sw.	P. B. Albright.
Wagon Wheel Gap	Mineral	8,434	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. Eland.
New Mexico.																				
Agricultural College	Dona Ana	3,863	44	62.0	0.0	90	1	29	22	48	0.03	− 0.73	0.03	0.0	1	16	14	1	s.	New Mexico Agri. College.
Alamogordo (near)	Otero	4,338	9	60.0	− 0.4	89	1†	28	21	48	0.70	− 0.12	0.63	0.0	4	19	11	1	.....	Geo. C. Bemis.
Alamogordo	do	4,320	1	.....	.....	.....	.....	.....	.....	.....	0.30	.....	0.30	0.0	1	.....	.....	.....	.....	El Paso & Southwest. R. R.
Albuquerque	Bernalillo	5,000	34	.....	.....	.....	.....	24	21	.....	0.29	− 0.35	0.18	T.	3	19	8	4	w.	Pitt Ross, C. E.
Ancho	Lincoln	6,112	1	.....	.....	.....	.....	.....	.....	.....	0.15	.....	0.15	0.5	1	25	0	6	.....	El Paso & Southwest. R. R.
Artesia	Eddy	3,350	2	59.8	.....	91	4	24	28	49	0.46	.....	0.27	0.0	4	23	5	3	se.	Will Benson.
Aspen Grove Ranch	Rio Arriba	9,000	1	.....	.....	.....	.....	0	21	.....	2.30	.....	1.66	24.6	5	11	16	4	.....	Junius D. Maupin.
Bateman's Ranch	do	8,900	1	.....	.....	.....	.....	.....	.....	.....	2.22	.....	0.71	19.5	5	21	4	6	w.	John W. Bateman.
Bluewater	Valencia	6,732	8	47.4	.....	84	1	14	29	60	1.14	.....	0.40	3.0	8	11	15	5	s.	Bluewater Development Co.
Bluewater Reservoir	do	9,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Boaz	Chaves	4,154	1	58.6	.....	85	1	22	21†	43	0.36	.....	0.29	0.0	2	26	3	2	s.	D. C. Savage.
Capitan	Lincoln	6,348	1	.....	.....	.....	.....	.....	.....	.....	0.92	.....	0.51	4.0	4	20	2	9	n.	El Paso & Southwest. R. R.
Carlsbad	Eddy	3,120	15	62.3	− 1.1	94	4	26	28	50	0.34	− 0.90	0.18	0.0	4	25	3	3	se.	U. S. Reclamation Service.
Carrizozo	Lincoln	5,429	2	60.4	.....	95	8	25	21	38	0.60	.....	0.50	T.	2	23	8	0	sw.	El Paso & Southwest. R. R.
Carson Park	Taos	7,650	.....	.....	.....	.....	.....	.....	.....	.....	0.75	.....	0.45	1.0	2	.....	.....	.....	.....	Lester S. Myers.
Chama	Rio Arriba	7,851	11	45.8	− 1.9	83	8	9	21	48	1.86	+ 0.56	1.06	3.0	5	24	3	4	sw.	Frank C. Johnson.
Cloudcroft	Otero	8,650	7	45.6	.....	70	10†	12	21	40	0.68	.....	0.60	8.0	2	18	10	3	sw.	El Paso & Southwest. R. R.
Corona	Lincoln	6,666	1	.....	.....	.....	.....	.....	.....	.....	0.65	.....	0.30	4.0	3	.....	.....	.....	s.	Do.
Coyote	do	5,800	1	.....	.....	.....	.....	.....	.....	.....	0.49	.....	0.25	T.	4	17	0	14	sw.	Do.
Cundiyo	Santa Fe	6,889	1	.....	.....	.....	.....	.....	.....	.....	0.61	.....	0.25	2.4	4	21	0	10	w.	Teofilo Vijil.
Demonstration Farm	San Miguel	6,800	1	.....	.....	.....	.....	.....	.....	.....	0.68	.....	0.25	2.0	3	.....	.....	.....	.....	Erb & Westerman.
Duran	Torrance	6,272	1	.....	.....	.....	.....	.....	.....	.....	0.79	.....	0.54	2.5	2	22	5	4	.....	El Paso & Southwest. R. R.
Elk (near)	Chaves	7,400	11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Boyd Williams.
Escondido	Otero	4,014	1	.....	.....	.....	.....	.....	.....	.....	0.26	.....	0.15	0.0	2	19	8	4	se.	El Paso & Southwest. R. R.
Espanola	Rio Arriba	5,590	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. E. F. McBride.
Estancia	Torrance	6,140	5	45.2	.....	72	2	18	24	40	2.04	.....	1.40	2.0	4	20	6	5	e.	New Mex. Cent. R./R.
Fort Stanton	Lincoln	6,231	32	52.4	+ 0.5	86	1	18	28	55	0.56	− 0.78	0.33	4.0	4	23	4	4	w.	U. S. Sanitarium.
Fort Sumner	Guadalupe	3,960	2	54.9	− 1.0	85	7	19	27	48	0.61	− 0.18	0.42	0.0	2	28	2	1	sw.	F. A. Manzanares.
Gallinas	Lincoln	6,635	1	.....	.....	.....	.....	.....	.....	.....	1.71	.....	0.71	0.0	4	24	1	6	w.	El Paso & Southwest. R. R.
Gallinas Planting Station	San Miguel	7,500	3	49.6	.....	84	7	9	21	49	1.27	.....	1.00	11.0	4	17	11	3	nw.	U. S. Forest Service.
Harvey's Upper Ranch	do	9,400	1	.....	.....	.....	.....	.....	.....	.....	2.43	.....	1.04	36.7	9	17	9	5	se.	Simon B. Warner.
Hillsboro	Sierra	5,224	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. Frank I. Givens.
Hodges	Taos	8,484	1	.....	.....	.....	.....	.....	.....	.....	0.61	.....	0.43	T.	2	22	4	5	nw.	A. Porter.
Hondo Reservoir	Chaves	3,904	1	58.6	.....	93	4	22	28	51	0.31	.....	0.15	T.	3	26	2	3	se.	U. S. Reclamation Service.
Hope	Eddy	4,000	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. W. Board.
Hopewell	Rio Arriba	9,500	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John T. Blanton.
Jemez Springs	Sandoval	6,100	.....	51.2	.....	81	8	21	21	39	1.96	.....	1.08	6.0	7	20	1	10	sw.	Linus L. Shields.
Knowles (near)	Eddy	4,300	.....	59.8	.....	89	1	20	28	46	0.45	.....	0.19	T.	4	27	0	4	sw.	J. W. Mosley.
Laguna	Valencia	5,840	5	53.8	.....	82	1†	23	21	46	1.04	.....	0.32	3.5	4	19	0	12	nw.	Gus Weiss.
Lagunita	Guadalupe	4,500	5	53.4	.....	83	1†	17	28	50	0.74	.....	0.57	1.0	3	21	2	8	w.	P. A. Turnbull.
Lake Valley	Sierra	5,412	5	.....	.....	.....	.....	.....	.....	.....	0.60	.....	0.48	0.0	3	22	7	2	sw.	Wm. P. Keil.
Las Vegas	San Miguel	6,384	23	48.8	− 1.0	85	8	17	21	54	0.85	− 0.18	0.39	1.5	4	23	5	3	s.	Dr. Wm. Curtiss Bailey.
Liston	Chaves	5,000	.....	.....	.....	.....	.....	.....	.....	.....	0.11	.....	0.11	0.0	1	24	5	2	sw.	H. G. Liston.
Los Lunas (near)	Valencia	4,900	20	55.0	+ 1.3	89	7	20	21	56	0.12	− 0.72	0.12	T.	1	20	9	2	.....	Richard Pohl.
Los Tanos	Guadalupe	4,919	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	El Paso & Southwest. R. R.
Magdalena	Socorro	6,557	5	52.2	.....	86	12	19	28	50	0.39	.....	0.30	T.	3	23	7	1	w.	Wm. Pender.
Mineral Hill	San Miguel	7,050	5	.....	.....	.....	.....	.....	.....	.....	1.06	.....	0.62	6.0	3	12	17	2	sw.	W. M. Nelson.
Monterey	Otero	4,436	1	.....	.....	88	1†	34	21†	.....	0.53	.....	0.40	0.0	6	21	6	4	e.	El Paso & Southwest. R. R.
Mountainair	Torrance	6,547	8	51.6	.....	86	1	15	21	44	0.87	.....	0.41	4.0	4	20	9	2	sw.	Mrs. John W. Corbett.
Newman	Otero	3,989	1	.....	.....	95	1	.....	.....	.....	0.00	.....	0.00	0.0	0	26	3	2	e.	El Paso & Southwest. R. R.
Noria	Dona Ana	4,114	1	.....	.....	92	1	.....	.....	.....	0.18	.....	0.10	0.0	2	27	2	2	w.	Do.
Orange	Otero	5,000	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jas. Brownfield, jr.
Orogrande	do	4,171	1	.....	.....	92	1†	.....	.....	.....	0.20	.....	0.10	0.0	2	19	9	3	w.	El Paso & Southwest. R. R.
Oscura (near)	Lincoln	5,016	1	.....	.....	.....	.....	.....	.....	.....	1.01	.....	0.50	T.	4	.....	.....	.....	.....	Eugene F. Jones.
Otis	Eddy	3,100	1	.....	.....	.....	.....	.....	.....	.....	0.37	.....	0.23	0.0	3	28	1	2	se.	A. M. Hove.
Otto	Santa Fe	6,200	1	.....	.....	.....	.....	.....	.....	.....	0.27	.....	0.10	1.0	4	.....	.....	.....	.....	W. K. Davis.
Pastura	Guadalupe	5,285	1	.....	.....	88	1	.....	.....	.....	0.73	.....	0.52	2.0	3	22	5	4	sw.	El Paso & Southwest. R. R.
Picacho (near)	Lincoln	5,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	P. D. Southworth.
Plainview (near)	Chaves	4,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. P. Adair.
Red River Canyon	Taos	8,956	2	43.7	.....	78	2	3	22	52	1.05	.....	0.40	11.0	4	24	6	1	e.	Mrs. L. R. Penn.
Rincon	Dona Ana	4,050	12	61.2	+ 1.2	93	1	29	29	51	0.29	− 0.19	0.17	0.0	2	16	12	3	w.	Chas. H. Raitt.
Rio Grande Dam	Sierra	4,265	12	59.6	+ 2.0	92	4	30	21	54	0.69	+ 0.05	0.66	0.0	2	24	5	2	se.	U. S. Reclamation Service.
Rosedale	Socorro	6,910	5	52.1	.....	80	8	22	21	34	1.34	.....	1.10	4.0	5	22	0	9	w.	W. H. Martin.
Roswell	Chaves	3,578	12	57.4	− 2.1	90	1	24	28	48	0.36	− 0.48	0.24	T.	3	21	7	3	s.	U. S. Weather Bureau.
San Marcial	Socorro	4,439	14	57.4	− 0.5	88	2	25	21	53	.....	.....	.....	.....	1	21	4	6	s.	Atch., Topeka & S. F. R. R.
San Rafael	Valencia	6,509	6	53.2	− 0.5	94	9	20	21	60	1.86	.....	0.47	2.0	8	14	3	14	nw.	Dr. Chas. M. Grover.
Santa Fe	Santa Fe	7,013	37	49.5	− 0.5	80	8	20	28	36	0.40	− 0.67	0.17	0.4	5	28	8	3	ne.	U. S. Weather Bureau.
Santa Fe Canyon	do	8,000	1	.....	.....	.....	.....	.....	.....	.....	0.07	.....	0.03	0.2	4	19	4	8	w.	Candelario Martinez.
Santa Rosa	Guadalupe	4,624	10	58.0	.....	92	7	20	28	55	0.68	− 0.29	0.29	2.0	4	19	10	2	w.	John R. Chapman.
Socorro	Socorro	4,600	18	59.2	+ 1.1	95	4	24	29	54	1.57	+ 0.27	1.12	0.0	4	30	0	1	n.	J. J. Leeson.
Stanley	Santa Fe	6,317	1	50.9	.....	86	23†	12	27†	60	0.30	.....	0.20	1.0	2	18	7	6	nw.	Henry Winan.
Strauss	Dona Ana	4,080	11	.....	.....	.....	.....	.....	.....	.....	0.02	− 0.70	0.02	0.0	1	23	4	4	.....	Southern Pacific R. R.
Swastika Ranch	Valencia	6,400	1	.....	.....	.....	.....	.....	.....	.....	2.76	.....	1.20	18.0	6	22	3	6	nw.	Swastika S. & L. Co.
Taft	Guadalupe	5,000	.....	.....	.....	.....	.....	.....	.....	.....	0.44	.....	0.35	0.0	3	22	3	6	s.	A. J. Wilmeth.
Tajique (near)	Torrance	6,900	.....	.....	.....	.....	.....	.....	.....	.....	1.23	.....	0.65	8.0	6	19	8	4	.....	U. S. Forest Service.
Taos	Taos	6,983	12	50.6	+ 0.8	86	8†	16	21	50	0.31	− 0.43	0.27	0.0	2	21	9	1	w.	Alexander Gusdorf.
Taos Canyon	do	8,959	1	.....	.....	.....	.....	.....	.....	.....	1.38	.....	0.44	3.0	6	.....	.....	.....	.....	Leocadio Martinez, jr.
Tecolote	Lincoln	6,539	1	.....	.....	.....	.....	.....	.....	.....	0.42	.....	0.30	2.0	3	27	0	4	w.	El Paso & Southwest. R. R.
Three Rivers	Otero	4,559	1	.....	.....	.....	.....	.....	.....	.....	0.63	.....	0.39	0.0	4	23	3	5	.....	Do.
Tijeras Canyon	Bernalillo	6,214	1	.....	.....	.....	.....	.....	.....	.....	0.69	.....	0.27	3.0	3	17	11	3	w.	U. S. Forest Service.
Torrance	Torrance	6,433	1	.....	.....	.....	.....	.....	.....	.....	0.39	.....	0.15	2.0	3	21	3	7	se.	El Paso & Southwest. R. R.
Tres Piedras	Taos	8,076	5	46.4	.....	82	10	− 1	21	52	2.00	.....	1.10	14.0	4	21	6	4	sw.	Edwin B. Seward.
Truchas	Rio Arriba	7,935	1	46.1	.....	80	8	11	21	44	0.90	.....	0.40	5.0	3	11	20	0	.....	Ignacio Cordova.
Tularosa	Otero	4,436	.....	59.3	.....	89	1†	27	20	43	0.52	.....	0.52	0.0	1	25	4	2	sw.	Irby L. Fairless.
Vaughn	Guadalupe	5,952	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	El Paso & Southwest. R. R.
Virsylvia	Taos	7,500	.....	.....	.....	74	10	11	21	.....	0.42	.....	0.16	2.5	5	25	1	5	s.	Dr. I. N. Woodman.

TABLE 1.—*Climatological data for October, 1910. District No. 8*—Continued.

Stations	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
New Mexico—Cont'd.																				
Winsors	San Miguel	8,200	12	39.1	− 2.9	68	9	12	21	41	1.02	− 0.61	0.41	2.0	4	19	7	5	w.	Henry D. Winsor.
Texas.																				
Abilene	Taylor	1,738	25	65.2	+ 1.0	93	13	34	28	39	4.62	+ 2.29	3.77	0.0	5	19	4	8	s.	U. S. Weather Bureau.
Albany	Shackelford	1,429	16	63.0	− 0.6	97	14	26	29	52	3.64	+ 1.56	1.75	0.0	4	25	1	5	.....	N. L. Bartholomew.
Anahuac‖	Chambers	23	1								3.10		1.23	0.0	7					B. H. Collins.
Austin	Travis	593	54	68.7	− 0.3	90	1†	34	29	34	2.72	− 0.11	1.60	0.0	6	22	6	3	sw.	A. Deussen.
Ballinger	Runnels	1,637	15	64.9	+ 0.1	93	5†	29	29	45	1.42	− 0.76	0.77	0.0	3	21	5	5	s.	E. M. Eubank.
Barstow	Ward	2,573	3								T.		T.	0.0	0					W. H. Denis.
Bay City	Matagorda	53									3.63		2.45	0.0	3	19	5	7	s.	E. C. Quereau.
Beaumont	Jefferson	29	13	70.4	+ 0.5	92	1†	34	29	35	3.61	+ 0.78	1.88	0.0	4	18	0	13	ne.	John Bender.
Beeville	Bee	225	14	71.8	− 1.0	96	5	38	29	37	1.54	− 0.97	0.68	0.0	4	14	9	8	n.	L. E. Dickey.
Big Springs	Howard	2,396	12	65.2	.....	95	1	33	21†	45	2.32	+ 0.18	1.68	0.0	4	21	6	4	s.	B. Reagan.
Blanco	Blanco	1,350	14	66.5	− 0.5	96	2	27	29	39	2.76	+ 0.62	1.27	0.0	6	22	5	4	s.	R. C. Crist.
Boerne	Kendall	1,412	18	67.4	+ 0.3	98	16†	27	27	48	3.11	+ 0.13	1.10	0.0	4	19	3	9	n.	F. W. Schweppe.
Booth	Fort Bend	81	9								1.99		0.88	0.0	6	22	0	9	e.	T. R. Booth.
Boquillas	Brewster			71.0[a]		95		41	29											J. O. Langford.
Bowie	Montague	1,113	16	68.7	+ 3.5	99	12†	30	28	40	1.49	− 1.50	0.98	0.0	3	17	6	8	n.	Craig Anderson.
Brazoria	Brazoria	25	21	71.2	+ 1.2	96	15	31	29	44	2.77	− 1.56	2.13	0.0	7	26	1	4	n.	Mrs. M. A. Stevens.
Brazos	Palo Pinto	801	1								1.94		0.98	0.0	4	18	9	4	s.	Robt. E. Boyett.
Brenham	Washington	350	21	69.8	− 0.3	93	15	36	29	38	1.17	− 1.59	0.32	0.0	6	14	7	10	e.	Mrs. B. F. Sloan.
Bridgeport	Wise	754	1								1.36		1.20	0.0	3	21	5	5	s.	Claude Strange.
Brighton	Nueces	12	14	74.5	0.0	92	1†	45	30	35	0.67	− 1.26	0.25	0.0	3	23	5	3	se.	G. H. Ritter.
Brownsville	Cameron	38	21	73.4	− 0.8	93	4	44	29	30	3.31	+ 0.10	1.39	0.0	5				n.	U. S. Weather Bureau.
Brownwood	Brown	1,342	20	64.8	− 1.3	94	13	28	29	46	2.81	+ 0.78	1.05	0.0	4	14	9	8	s.	Mrs. Pearl Smith.
Cameron	Milam		2	70.3	.....	98	15	31	28	37	2.88	.....	1.12	0.0	6	25	4	2	s.	J. E. Watts.
Carmona	Polk	320	2	68.0	.....	95	15	22	29	48	3.23	.....	1.07	0.0	6	21	8	2	s.	M. S. Spitler.
Claytonville	Fisher	2,100	15	63.3	.....	94	1	30	28	45	2.74	+ 0.29	1.70	0.0	5	17	6	8	s.	Wm. Lanius.
Coleman	Coleman	1,710	16	68.4	+ 2.5	96	14†	30	29	40	1.73	− 0.44	0.92	0.0	3	12	14	5	s.	J. E. Stevens.
College Station	Brazos	308	19	70.6	+ 1.2	96	15	32	29†	42	0.77	− 2.06	0.20	0.0	8	23	4	4	s.	Prof. G. S. Fraps.
Colorado	Mitchell	2,066	16	61.1[l]	.....	92[a]	2	33	21	52[a]	3.53	+ 1.90	1.67	0.0	4	14[l]	0[l]	8[l]	s.[l]	R. M. Webb.
Columbia	Brazoria	34	21	67.9	− 1.8	93	15	30	29	38	3.14	+ 0.03	2.71	0.0	5	22	4	5	s.	R. B. Loggins.
Columbus	Colorado	206	6								2.38	.....	0.94	0.0	6	16	8	7	n.	Mrs. Sophie Bridge.
Comstock	Valverde	1,557	1																	E. F. Prosser.
Corpus Christi	Nueces	20	23	72.0	− 0.6	91	5	48	29	26	0.17	− 1.88	0.11	0.0	4	17	8	6	n.	U. S. Weather Bureau.
Corsicana	Navarro	445	21	68.4	+ 1.4	97	2	32	29†	41	0.51	− 2.23	0.21	0.0	3	27	1	3	nw.	E. L. Gibson.
Crockett	Houston	350	6	70.2	.....	97	15	31	29	45	1.09	.....	0.34	0.0	6	22	5	4	s.	A. M. Rencher.
Cuero	DeWitt	177	21	72.4	+ 1.3	100	4	30	29	50	0.57	− 2.24	0.29	0.0	6	15	6	10	n.	H. R. Frobese.
Dallas	Dallas	466	21	67.0	+ 0.8	100	14	26	30	47	0.93	− 1.59	0.53	0.0	2	22	1	8	s.	G. A. Eisenlohr.
Danevang	Wharton	145	14	69.9	− 1.6	95	3	36	21†	40	2.30	− 2.12	1.20	0.0	2	26[a]	1[a]	3[a]	se.	H. P. Hermansen.
Decatur	Wise	1,047	14								1.44	− 0.92	1.44	0.0	1	17	11	3	.....	Fort Worth & Denver Ry
Del Rio	Valverde	952	4	69.0	− 0.9	97	13	36	22	40	1.01	− 0.48	0.71	0.0	6	17	7	7	se.	U. S. Weather Bureau.
Devine‖	Medina	653	....	70.4	.....	96	13	33	29†	43	2.40	.....	1.00	0.0	3	23	3	5	se.	M. A. Keller.
Dialville	Cherokee	575	6	70.2	.....	94	14	30	29	39	1.33	.....	1.21	0.0	3	22	4	5	s.	J. M. B. Knight.
Dilley	Frio	569									0.00		0.00	0.0						John W. Miller.
Dublin	Erath	1,466	15	66.4	+ 1.4	95	15	34	28	39	1.69	− 1.13	0.62	0.0	4	21	3	7	s.	Jno. O. Shafer.
Duval	Travis	820	21	69.4	− 0.6	93	15	38	30	34	3.95	+ 0.91	1.90	0.0	5	25	1	5	s.	J. C. Edgar.
Eagle Pass	Maverick	800	21	72.6	+ 0.1	99	16	38	23	44	0.47	− 1.11	0.45	0.0	2	9	18	4	.....	Jos. Metcalfe.
Edna	Jackson	71	1								1.97		1.00	0.0	3					E. L. Faires.
El Paso	El Paso	3,762	31	63.5	+ 1.1	90	1	35	21	39	0.02	− 0.93	0.01	0.0	2	24	7	0	e.	U. S. Weather Bureau.
Encinal	La Salle	558	2	72.0	.....	97	13	34	29	40	1.33	.....	1.30	0.0	2	14	15	2	ne.	H. C. Braden.
Fairland	Burnet	1,000	22	69.2	.....	98	13	31	29	47	2.16	+ 0.14	1.15	0.0	6	24	2	5	s.	R. L. Bush.
Falfurrias	Starr		3	71.6	.....	98	3†	28	29	44	2.22	.....	0.86	0.0	4	18	12	1	nw.	W. A. Gardner.
Flatonia	Fayette	465	2	71.5	.....	98	5	36	29	35	2.03	.....	1.14	0.0	6	21	7	3	s.	Fred W. Laux.
Flint‖	Smith	483		68.8		98	16	24	29	46	0.93		0.68	0.0	3	26	2	3	sw.	F. C. C. Carter.
Fort Clark	Kinney	1,050	23	67.5	− 2.5	94	12	36	20	34	1.97	+ 0.08	0.85	0.0	4	12	11	8	se.	Post Hospital.
Fort McIntosh	Webb	460	24	75.2	+ 1.6	99	5†	40	22†	39	2.30	+ 1.14	2.00	0.0	2	14	9	8	w.	Do
Fort Stockton	Pecos	3,050	13	66.0	+ 2.8	97	13	29	28	46	0.15	− 1.19	0.12	0.0	2	22	6	3	se.	H. H. Butz.
Fort Worth	Tarrant	670	15	67.4	+ 1.1	99	14	31	29	36	0.68	− 1.83	0.52	0.0	4	17	11	3	s.	U. S. Weather Bureau.
Fredericksburg	Gillespie	1,742	21	65.5	− 0.4	89	5	30	29	34	3.61	+ 1.44	1.23	0.0	5	21	4	6	n.	Arthur Striegler.
Gainesville	Cooke	738	21	66.6	+ 1.1	97	14	27	29	40	1.20	− 2.14	0.75	0.0	3				.....	J. L. Hickson.
Galveston	Galveston	69	40	72.1	− 0.3	87	15	47	29	20	9.36	+ 5.18	6.62	0.0	9	21	8	2	se.	U. S. Weather Bureau.
Gatesville	Coryell	795	6	66.8	.....	94	14	28	28	38	2.25	.....	1.00	0.0	3	28	3	0	.....	John Ryan.
Georgetown	Williamson	750	15	67.6	+ 0.2	96	15	29	29†	47	3.11	− 0.57	1.28	0.0	7	23	5	3	s.	Prof. R. F. Young.
Gonzales	Gonzales	299	5								1.98		1.18	0.0	7	17	3	11	n.	J. M. Johnson.
Graham	Young	1,040	11	67.3	+ 3.3	100	14	28	29	44	1.98	− 0.49	1.75	0.0	3	23	4	4	n.	C. W. Johnson.
Grand Saline	Van Zandt										0.36		0.20	0.0	3	20	10	1	n.	F. E. Whittemore.
Grapevine	Tarrant	670	20	69.5[f]	+ 2.3	101	15	35	28	39[f]	0.57	− 2.66	0.47	0.0	2	17[a]	6[a]	3[a]	s.	W. J. Crowley.
Greenville	Hunt	550	10	67.9	+ 2.2	97	2	30	29	40	1.38	− 2.51	1.03	0.0	2	21	0	10	s.	J. P. Regan.
Hallettsville	Lavaca	235	19	70.0	− 0.7	93	5	32	29	38	0.94	− 2.25	0.59	0.0	2	21	5	5	s.	Dr. J. E. Lay.
Harper	Gillespie										2.67		1.10	0.0	5	18	0	13	.....	Christian Fritz.
Haskell	Haskell	4,013	19	65.8	+ 2.2	99	1	34	27	47	1.08	− 0.63	0.87	0.0	2	24	3	4	n.	P. D. Sanders.
Hebbronville	Duval		3								1.75		1.05	0.0	2					Henry Edds.
Hempstead	Waller	254	6								3.25		1.40	0.0	7	17	4	10	n.	J. H. Hancock.
Henderson	Rusk	500	1								2.19		1.25	0.0	6	22	3	6	.....	M. Kangerga.
Hewitt	McLennan	664	15								0.75		0.60	0.0	4				.....	I. H. Earle.
Hillsboro	Hill	628	7	69.4	.....	98	17	32	28†	46	0.57		0.57	0.0	1				.....	Thompson & Campbell.
Hondo	Medina	901	8	67.2	− 2.5	94	1†	37	30	34	4.65	+ 2.40	2.60	0.0	4	18	8	5	.....	H. E. Haass.
Houston	Harris	138	21	70.5	+ 0.3	91	15	39	29	28	1.98	− 1.45	0.73	0.0	8	16	9	6	se.	U. S. Weather Bureau.
Huntsville	Walker	400	22	68.0	0.0	98	2†	29	29†	41	2.05	− 1.06	0.95	0.0	4	18	0	13	se.	W. Y. Barr.
Jayton	Kent																			Wichita Valley Ry. Co.
Jewett	Leon	496	6	67.3	.....	97[f]	2	28	29	41[f]	0.60	.....	0.30	0.0	2	20	2	9	s.	Earle Adkisson.
Junction	Kimble	1,645	7	65.2	.....	94	1†	24	29	56	2.85	.....	1.20	0.0	4	25	0	6	.....	Judge John S. Durst.
Kaufman	Kaufman	448	11	69.6	+ 2.7	95	1†	32	30	42	1.92	.....	1.00	0.0	3	23	6	2	s.	B. J. Hubbard.
Keene	Johnson	940	2																	Industrial Academy.
Kerrville	Kerr	1,650	15	68.2	+ 4.6	93	1	39	22	36	3.33	+ 0.80	1.37	0.0	7	15	1	15	.....	Mrs. F. Coleman.
Knickerbocker	Tom Green	2,050	6	65.2	.....	90	1†	27	28	42	1.59	.....	0.59	0.0	5	22	5	4	s.	Jos. Tweedy.
Kopperl	Bosque	576	13								0.78	− 2.81	0.60	0.0	3	12	12	7	n.	T. A. Johnson.
Lagrange	Fayette										2.49	.....	1.37	0.0	8	23	1	7	se.	August Hermes.
Lamesa	Dawson	2,500									0.98		0.49	0.0	3					S. D. Austin.
Lampasas	Lampasas	1,026	19	66.0	− 0.6	97	12	28	30	50	2.95	+ 0.12	1.04	0.0	6	16	10	5	n.	Mrs. K. I. Webber.
La Parra	Cameron	38	8								2.06	.....	1.33	0.0	2				.....	Jno. G. Kenedy.
Laureles Ranch	Nueces	20	11								0.05	.....	0.05	0.0	1				.....	Matt Cody.
Liberty	Liberty	38	6	69.2	.....	98	2	29	29	42	4.27	.....	0.74	0.0	9	21	5	5	n.	Mrs. Fannie Sneed.
Llano	Llano	1,040	19	68.0	− 0.7	94	2†	28	29	43	1.18	− 0.94	1.02	0.0	5	24	4	3	ne.	E. W. Torrence.
Llano Grande	Hidalgo	86	2	70.8	.....	95	13	32	29	42	0.60	.....	0.40	0.0	2	13	14	4	.....	M. D. Wardlow.
Long Lake	Anderson	229	5								1.94		1.84	0.0	2	21	4	6	n.	Geo. W. Ellis.
Longview	Gregg	336	21	67.4	+ 1.1	95	14	29	29†	42	1.09	− 1.80	0.84	0.0	3	21	1	9	se.	C. A. Propst.

TABLE 1.—*Climatological data for October, 1910. District No. 8*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Texas—Cont'd.																				
Lufkin	Angelina	325	3	69.6	.....	95	14	25	29	46	1.26	.....	0.45	0.0	6	26	2	3	s.	T. A. King..
Luling	Caldwell	418	21	68.8	− 1.4	91	1	34	29	36	2.65	− 0.27	1.04	0.0	6	21	4	6	n.	John Carter.
Marathon	Brewster	4,043	...	61.0	.....	84	12†	26	21	40	0.08	.....	0.08	0.0	1	16	4	11	s.	Rev. A. P. Willis.
Marble Falls	Burnet	771	2	.....	.....	.....	.....	.....	.....	.....	2.06	.....	0.80	0.0	8	21	0	10	n.	Wm. Harrison.
Marfa	Presidio	.....	2	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	R. K. Colquitt.
Marshall	Harrison	375	1	67.8	.....	95	1	23	29	44[a]	1.32	.....	0.55	0.0	7	8	20	3	e.	Lee Scott.
Matagorda	Matagorda	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.43	.....	2.10	0.0	2	23	5	3	se.	W. E. McNabb.
Mexia	Limestone	537	6	67.0	.....	96	15	29	29	43	1.30	.....	0.35	0.0	7	16	9	6	w.	Miss Josephine Newman.
Midland	Midland	.....	3	.....	.....	.....	.....	.....	.....	.....	1.20	.....	0.90	0.0	3	17	11	3	sw.	H. J. Elder.
Mission	Hidalgo	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	0.13	0.0	1	23	6	2	se.	L. H. Romig.
Mont Belvieu§	Chambers	65	....	.....	.....	.....	.....	.....	.....	.....	3.53	.....	1.40	0.0	7	20	5	6	n.	A. R. Shearer.
Mountain View	Pecos	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.29	.....	0.13	0.0	3	.....	.....	.....	.....	Lucius W. Gosselin.
Mt. Blanco	Crosby	2,750	22	61.5	0.0	91	13	25	28	50	1.13	− 0.98	0.60	T.	3	16	5	10	s.	H. C. Smith.
Nacogdoches	Nacogdoches	271	11	67.8	+ 2.0	93	14	25	29	45	2.27	− 1.14	1.44	0.0	4	20	2	9	n.	Miss Mary Hofmann.
New Braunfels	Comal	720	21	67.9	− 0.9	90	15	33	29	34	2.52	+ 0.16	1.36	0.0	4	22	4	5	.....	J. Giesecke.
Palestine	Anderson	510	28	68.6	+ 2.4	92	14	31	29	31	1.06	− 2.54	0.74	0.0	4	21	5	5	s.	U. S. Weather Bureau.
Panter	Hood	1,000	20	.....	.....	.....	.....	.....	.....	.....	1.09	− 1.63	0.63	0.0	4	.....	.....	.....	.....	E. H. Snider.
Pearsall	Frio	629	...	.....	.....	.....	.....	.....	.....	.....	2.23	.....	1.25	0.0	5	.....	.....	.....	.....	Earnest De Vilbiss.
Pierce	Wharton	102	4	69.4	.....	93	15	28	29	48	1.61	.....	0.95	0.0	3	15	12	4	.....	R. B. Pointer.
Plainview	Hale	3,370	18	61.6	.....	91	1	26	28	52	0.77	− 0.83	0.41	T.	3	25	3	3	s.	J. F. Sander.
Port Lavaca	Calhoun	20	9	71.5	.....	97	15	36	29	34	2.97	.....	1.52	0.0	3	22	5	4	se.	J. H. Bickford.
Post City	Garza	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.42	.....	0.80	0.0	4	24	3	4	s.	W. L. Dodd.
Ricardo	Nueces	57	1	72.1	.....	95	16	34	29	37	0.76	.....	0.53	0.0	5	20	9	2	se.	Lindsay Waters.
Riverside	Walker	169	6	.....	.....	.....	.....	.....	.....	.....	0.21	.....	0.21	0.0	1	19	0	12	n.	Mrs. C. W. Higdon.
Robert Lee	Coke	1,850	11	65.2	.....	92	13	33	28	43	2.21	+ 0.21	0.88	0.0	4	26	2	3	s.	H. D. Pearce.
Rockland	Tyler	136	6	.....	.....	.....	.....	.....	.....	.....	0.53	.....	0.28	0.0	3	19	2	10	s.	D. W. Bellamy.
Rossville	Atascosa	558	3	70.2	.....	94	2	32	21	42	2.78	.....	1.00	0.0	5	16	11	4	se.	W. F. M. Ross.
Runge	Karnes	308	15	.....	.....	.....	.....	.....	.....	.....	0.45	.....	0.45	0.0	1	.....	.....	.....	.....	Reiffert & Frobese.
Sabinal	Uvalde	964	6	71.0	.....	95	13†	35	29	39[a]	5.15	.....	1.87	0.0	6	16	5	10	ne.	Jas. Johnson.
Salado	Bell	.....	.....	.....	.....	.....	.....	.....	.....	.....	3.31	.....	2.35	0.0	4	19	4	8	s.	L. M. Crockett.
San Angelo	Tom Green	1,847	19	65.8	.....	92	1†	32	29	39	1.88	− 0.04	0.90	0.0	5	22	4	5	s.	Sam Crowther.
San Antonio	Bexar	701	25	69.0	− 0.2	94	15	36	29	32	3.35	+ 1.86	0.92	0.0	8	18	8	5	n.	U. S. Weather Bureau.
San Augustine	San Augustine	360	1	68.6	.....	96	1	24	29	47	2.83	.....	1.83	0.0	5	21	2	8	.....	F. A. Wilson.
San Juanito§	Hidalgo	.....	1	73.4	.....	96	13	38	29	34	1.23	.....	0.85	0.0	3	14	3	14	n.	J. B. McAllen.
San Marcos	Hays	588	17	67.8	− 0.4	91	1†	33	29†	39	3.61	+ 0.62	1.53	0.0	4	21	0	10	n.	Miss L. C. Ford.
San Saba	San Saba	1,712	6	65.6	.....	96	13	25	29	49	2.36	.....	1.10	0.0	5	23	6	2	s.	Jas. Burns.
Santa Gertrudes	Nueces	.....	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. B. Wright, jr.
Seymour	Baylor	1,320	4	65.0	.....	97	13	31	28	44	1.97	.....	0.93	0.0	4	25	2	4	s.	F. M. Deaver.
Sligo	Yoakum	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	F. N. Anderson.
Somerville	Burleson	251	1	67.8	.....	83	1†	29	29	40	0.09	.....	0.09	0.0	1	7	0	24	s.	W. A. Dolan.
Sonora	Sutton	2,200	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mike Murphy.
Sugarland	Fort Bend	79	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Cunningham Sugar Co.
Sutherland Springs§	Wilson	.....	.....	70.6	.....	96	1†	28	29	44	1.64	.....	0.57	0.0	6	20	1	10	n.	W. A. Clark.
Taylor	Williamson	583	9	68.0	− 0.3	93	15	35	29	33	4.56	+ 2.00	1.41	0.0	7	22	5	4	n.	U. S. Weather Bureau.
Temple	Bell	630	16	67.4	− 0.5	91	15	39	21†	28	1.59	− 0.75	0.74	0.0	5	22	2	7	s.	W. Goodrich Jones.
Theodore	Winkler	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.20	.....	0.15	0.0	1	.....	.....	.....	.....	W. H. Gibbs.
Thurber	Erath	.....	.....	.....	.....	.....	.....	.....	.....	.....	2.58	.....	0.97	0.0	4	.....	.....	.....	.....	J. K. Ball.
Tilden	McMullen	.....	4	71.1	.....	101	13†	28	29	54	2.73	.....	1.43	0.0	4	12	12	7	nw.	Wm. Kuykendall.
Tivoli	Refugio	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.00	.....	0.00	0.0	0	6	25	0	.....	W. H. Gisler.
Uvalde	Uvalde	937	2	69.2	.....	95	13	30	29	41	2.98	.....	1.25	0.0	5	13	14	4	se.	F. M. Getzendaner.
Valley Junction	Robertson	289	10	.....	.....	.....	.....	.....	.....	.....	0.94	− 1.93	0.30	0.0	5	22	1	8	s.	T. M. Williams.
Victoria	Victoria	187	12	72.7	− 1.1	97	13	34	29	45	0.90	− 2.76	0.60	0.0	2	19	1	11	s.	C. C. Zirjacks.
Waco	McLennan	424	21	68.6	+ 0.4	95	1†	32	29†	44	0.88	− 1.68	0.88	0.0	2	21	1	9	s.	E. H. Hall.
Waxahachie	Ellis	556	14	67.2	+ 1.3	100	13†	25	29†	51	0.44	− 2.25	0.40	0.0	2	23	4	4	n.	C. D. Longserre.
Weatherford	Parker	864	21	66.2	+ 0.6	95	13	30	29	36	1.50	− 1.04	0.90	0.0	6	24	1	6	s.	Miss J. Stickfort.
Wharton	Wharton	105	8	70.6	.....	97	15	29	29	45	1.88	.....	0.93	0.0	3	18	6	7	n.	Mrs. F. M. Hughs.
Wills Point	Van Zandt	524	5	67.6	.....	95	14	28	28	46	0.64	.....	0.36	0.0	2	22	5	4	n.	W. W. Gibbard.
Zapata	Zapata	300	1	73.0	.....	97	13†	37	29	39	2.02	.....	1.85	0.0	3	16	9	6	n.	F. H. Earnest.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs
Estimated by observer.
‖ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 8, Texas and Rio Grande Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Colorado.																																	
Blanca	Rio Grande		.03											.02		T.	.06	.54	.20	.02	02												0.87
Cumbres	do		.66														.82	.50	T.	.67	.39												3.06
Garnett	do																		.56	.08													0.64
Hermit	do																																
La Veta Pass	do																		.10	2.23	.24												2.57
Manassa	do														T.			.45	T.	.15													0.60
Platoro	do		.42									T.			.11	.02	.51	.34	.12	.32	.38												2.22
Saguache	do																*	.35	T.	.20	T.												0.55
San Luis	do		.10												T.		.51		.24	.08	T.												0.93
Wagon Wheel Gap	do																																
New Mexico.																																	
Agricultural College	Rio Grande																T.			.03													0.03
Alamogordo (near)	do		.02								.05				T.	T.		T.		*	.63												0.70
Alamogordo	do																			.30													0.30
Albuquerque	do		T.								T.	T.				18	.07	T.		.04	T.												0.29
Ancho	do		T.								T.	T.					T.			.15													0.15
Artesia	Pecos										.07	.01								.11	.27												0.46
Aspen Grove Ranch	Rio Grande											.02					.11	.31		.20	1.66												2.30
Batemans Ranch	do		T.								T.			.20		.57	.12			.62	.71												2.22
Bluewater	do		.08										.20		.05		.17	.05	.02	.17	.40												1.14
Bluewater Reservoir	do																																
Boas	Pecos											.29									.07												0.36
Capitan	do										.10							.07	44		.31												0.92
Carlsbad	do										.09	.06								.01	.18												0.34
Carrizozo	Rio Grande																		.50	.10	T.												0.60
Carson Park	do																.45			.30													0.75
Chama	do		T.														1.06	.40	.10	*	.30												1.86
Cloudcroft	Pecos											T.								.60	.08												0.68
Corona	do																.10	T.		.25	.30												0.65
Coyote	Rio Grande										.10						.07			.25	.07												0.49
Cundivo	do		.06															.18		.12	.25												0.61
Demonstration Farm	Pecos											.23								.20	.25												0.68
Duran	do										T.	T.						T.		.54	.25												0.79
Elk (near)	do																																
Escondido	Rio Grande		T.														.11			.15													0.26
Espanola	do																																
Estancia	do										.01						.03				1.40	.60											2.04
Fort Stanton	Pecos		T.									.05						.03		.33	.15												0.56
Fort Sumner	do															.42				.19													0.61
Gallinas	do										.20					.10					.70	.71											1.71
Gallinas Ptg. Station	do															.06	.09		T.	.12	1.00												1.27
Harveys Upper Ranch	do	T.	.08								.06	.04			T.	.16	.11	.07	.40	1.04	.47							T.					2.43
Hillsboro	Rio Grande																																
Hodges	do		T.										T.				T.	.43	.18	T.													0.61
Honda Reservoir	Pecos										T.	.04								.15	.12												0.31
Hope	do																																
Hopewell	Rio Grande																																
Jemez Springs	do		T.									.01			.04	T.	.38	.21	.02	.22	1.08												1.96
Knowles (near)	Pecos										.12	.19								.10	.04												0.45
Laguna	Rio Grande											.30				T.	.15			.27	.32												1.04
Lagunita	Pecos										.17									*	.57												0.74
Lake Valley	Rio Grande		T												T.	.07	.05			.48													0.60
Las Vegas	Pecos											T.					T.	.39		*	.31	.15						T.					0.85
Liston	do											.11																					0.11
Los Lunas (near)	Rio Grande															.12	T.				T.												0.12
Los Tanos	Pecos																																
Magdalena	Rio Grande		T.									T.				T.	.03		.06	.30													0.39
Mineral Hill	Pecos																.24			.62	.20												1.06
Monterey	Rio Grande		.04								.02					.01	.01			.05	.40												0.53
Mountainair	do		T.									.11			T.	T.	.03	T.	T.	.41	.32												0.87
Newman	do																																0.00
Noria	do															.10				.08													0.18
Orange	do																																
Orogrande	do										T.							.10		.10	T												0.20
Oscura	do											.05						.08		.38	.50												1.01
Otis	Pecos										.09									.05	.23												0.37
Otto	Rio Grande											.03					.04	.10		.10													0.27
Pastura	Pecos										.21									*	.52												0.73
Picacho (near)	do																																
Plainview (near)	do																																
Red River Canyon	Rio Grande										T.						T.	.15	.30	.40	.20												1.05
Rincon	do															T.	.12			T.	.17												0.29
Rio Grande Dam	do		T.											T.		.03	T.			.43	.23												0.69
Rosedale	do		.07									T.			T.	.01	.06			1.10	.10												1.34
Roswell	Pecos		T								.12									.10	.14												0.36
San Marcial	Rio Grande																																
San Rafael	do		.37									.14		.20		.47	.10	.05		.18	.35												1.86
Santa Fe	do		.02									T.			T.	T.	.12	T.	.10	.08	.08												0.40
Santa Fe Canyon	do		T.									T.			T.		.02		.03	.01	.01	T.											0.07
Santa Rosa	Pecos											.27						T.	.02	T.	.29	.10												0.68
Socorro	Rio Grande															.20			.20	1.12	.05												1.57
Stanley	do																.20				.10												0.30
Strauss	do																			.02													0.02
Swastika Ranch	do	T.	T.									.02		.08		.18	.68	T.	T.	.60	1.20												2.76
Taft	Pecos											.35								.07	.02												0.44
Tajique	Rio Grande		.32									.15				.03		.08		*	.65												1.23
Taos	do											.04					.27		T.														0.31
Taos Canyon	do		.07									.28					.44	.05	.16	.38													1.38
Tecolote	do											.02								.10	.30												0.42
Three Rivers	do		.03									.02						T.		.39	.19												0.63
Tijeras Canyon	do	.15									T.	T.					T.	T.		.27	.27												0.69
Torrance	Pecos											.14					.10			.15													0.39
Tres Piedras	Rio Grande	T.	T.								T.	T.			T.	T.	1.10	T.	.20	.30	.40												2.00
Truchas	do		T.															.40	.10	.40													0.90
Tularosa	do															T.			T.	.52													0.52
Vaughn	Pecos																																
Virsylvia	Rio Grande		.02														.16		.07	.04	.13												1.02
Winsors	Pecos																.41		.30	.18	.13												
Texas.																																	
Abilene	Brazos										.23	.57							.88	2.92	.02												4.62
Albany	do	.20										.74								1.75	.95												3.64
Anahuac	Coast	.51			.32	.36	.09	1.23			.54		.05																				3.10
Austin	Colorado				.13	.04	.26				.23	.46									1.60												2.72
Ballinger	do				.25							.77									.40												1.42

TABLE 2.—*Daily precipitation for October, 1910. District No. 8*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
Barstow	Pecos										T.																						T.
Bay City[1]	Colorado			.53							.65		2.45								T.												3.63
Beaumont[1]	Neches			.06	.69	1.88	.98					T.																				3.61
Beeville[1]	Coast				.57		T.				T.	.29						T.			.15	.53											1.54
Big Springs	Colorado		T.								.40	.23								1.68	.01												2.32
Blanco[1]	Guadalupe				.77	.13					.10	.26									1.27	.23											2.76
Boerne	San Antonio			.80	.61					T.	.60								1.10														3.11
Booth[1]	Brazos			.08	.25		.22				.44	.88										.12											1.99
Boquillas	Rio Grande																																
Bowie	Trinity			T.																.45	.98	.06											1.49
Brazoria	Brazos		.06	.23		.04	.24			.04	2.13										.03							T					2.77
Brazos[1]	do			.27									.12								.57	.98											1.94
Brenham[1]	do			T.	.01	.23	.15				.32	.31										T.	.15											1.17
Bridgeport[1]	Trinity		.04										.12									1.20											1.36
Brighton	Coast		.25				.20				.22											T.											0.67
Brownsville	Rio Grande			.04			.96																		.07	1.39		.85					3.31
Brownwood[1]	Colorado			1.05	.03	T.					T.	.93	T.								.80	T.											2.81
Cameron[1]	Brazos				1.12	.14						.75									.58	.16	.13										2.88
Carmona	Neches	1.07	T.	.75	.30	.02						.99									T.	.10											3.23
Claytonville	Brazos		.10			T.					.17	.50								1.70	.27												2.74
Coleman	Colorado		.92								*	.36								.45													1.73
College Station	Brazos			.15		.10	.05			T.	.19	.03	.04								.20	.01											0.77
Colorado	Colorado		.17									1.10						.59		1.67													3.53
Columbia	Brazos			.30	.07		.04			.02	2.71																	T.					3.14
Columbus[1]	Colorado			T.	.20	.32	.94				.18	.58										.16											2.38
Comstock	Rio Grande																																
Corpus Christi	Coast	.03	T.	T.		T.	.01			T.	.11										.02												0.17
Corsicana[1]	Trinity				.18								.12								.21												0.51
Crockett	do	.20		.34	.25	.05					T.										.05	.20											1.09
Cuero[1]	Guadalupe									.16		.28	.01								.04	.06					.02						0.57
Dallas[1]	Trinity			T.	T.								.53								.40												0.93
Danevang	Coast	T.		T.		1.10					1.20																						2.30
Decatur	Trinity																			1.44													1.44
Del Rio	Rio Grande			.71	.08					.03	.07	T.								.08					.04								1.01
Devine	Nueces			1.00	.97					T.	.43										T.												2.40
Dialville	Neches			1.21	T.	T.						.02	T.								.10												1.33
Dilley	Nueces																																0.00
Dublin[1]	Brazos			.50							T.	.48	.09								.62												1.69
Duval	Colorado			.21	.45					T.	.51	.88									1.90												3.95
Eagle Pass	Rio Grande				.45																	.02											0.47
Edna	Lavaca					.90	.07				1.00																							1.97
El Paso	Rio Grande										.01					T.				.01													0.02
Encinal	Nueces				1.30																.03												1.33
Fairland	Colorado			.37	.17					.01	.20	.26									1.15												2.16
Falfurrias	Coast			.73	.51		.86				12										T.					T.							2.22
Flatonia	Guadalupe			.06	.14					.05	.42	1.14									.22												2.03
Flint	Neches			.68	.16							T.									.09	T.											0.93
Fort Clark[1]	Rio Grande		.46	.26	T.							.85								.40					T.								1.97
Fort McIntosh	do			2.00																						.30							2.30
Fort Stockton	Pecos										.12	.03								T.	T.												0.15
Fort Worth	Trinity			T.	.11						T.	.05								28	.24												0.68
Fredericksburg	Colorado			.99	1.10					T.	.04	.25									1.23												3.61
Gainesville	Trinity					.25															.75	.20											1.20
Galveston	Coast	T.		.45	.55	.02	6.60			.18	1.12	.38	.03								.03							T.					9.36
Gatesville	Brazos				1.00							.55									.70												2.25
Georgetown[1]	do				.22	.04					.36	1.28	.13								.88	.20											3.11
Gonzales[1]	Guadalupe				.12	.13	.14				.24	1.18									.10	.07											1.98
Graham	Brazos			T.							T.	.68								1.75	.55												1.98
Grand Saline	Sabine		.08	T.	.08	T.						T.									.20												0.36
Grapevine	Trinity				T.							.10									.47												0.57
Greenville[1]	Sabine												1.03								.35												1.38
Hallettsville	Lavaca		T.	T.	T.	T.				T.	.59	.35								T.					T.								0.94
Harper	Colorado			.97	.30						.20	.10									1.10												2.67
Haskell	Brazos		T.									.21								.87													1.08
Hebbronville	Coast			.70			1.05																										1.75
Hempstead[1]	Brazos			.20	.65	.10	1.40	T.			.50	.20	T.								.20												3.25
Henderson	Neches	.03		1.25	T.	.10						.70									.09							.02					2.19
Hewitt	Brazos			T.	.01					T	T.	.08									.60	.06											0.75
Hillsboro	do				.57																												0.57
Hondo	Nueces			1.10	2.60					T.	.55										.40												4.65
Houston	Coast		.35	.18	.14	T.	.43			.18	.57	.03									.10							T.					1.98
Huntsville[1]	Trinity	.45		T.	.44	.95					T.	.21										T.											2.05
Jayton	Brazos																																
Jewett[1]	Trinity		T.	.30	T.						T.	T.								T.	.30												0.60
Junction	Colorado			.98	.12							.55									1.20												2.85
Kaufman	Trinity			.62	T.								1.00								.30												1.92
Keene	Brazos																																
Kerrville[1]	Guadalupe	.10	.75		35	.45					.09	.22									1.37												3.33
Knickerbocker	Colorado		T.	.59						T.	.40	.20								.24	.16												1.59
Kopperl[1]	Brazos			.08	.10	T.						T.									.60												0.78
Lagrange	Colorado		.07	.06	.08	.16				.27	.25	1.37									.23												2.49
Lamesa	do										.49	.04								.45													0.98
Lampasas[1]	Brazos				.31	.11					.03	.90	.56							1.04													2.95
La Parra	Coast			.73			1.33																										2.06
Laureles Ranch	do		.05																														0.05
Liberty[1]	Trinity	.66	.04	.74	.52	.72	.64			T.	T.	.24	.67									.04												4.27
Llano	Colorado			.08	.03						.02	.03									1.02												1.18
Llano Grande[1]	Rio Grande																									.20	.40	T.					0.60
Long Lake[1]	Trinity	.10				1.84															T.												1.94
Longview[1]	Sabine				.84	.13																.12											1.09
Lufkin	Neches	.39		.45	.13	.02						.02									T.	.25											1.26
Luling[1]	Guadalupe				.17	1.04					.06	.94									.30	.14											2.65
Marathon	Rio Grande										.08									T.													0.08
Marble Falls[1]	Colorado		.14		.14	.16				T.	.20	.38	.20								.80	.04											2.06
Marfa	Rio Grande																																0.00
Marshall	Sabine	.02		.55	.37	.07	.03						.26								.02												1.32
Matagorda	Coast										2.10									.33													2.43
Mexia[1]	Brazos	.26		.02	.28	.05				T.		T.	.10								.35	.24											1.30
Midland	Colorado			.10							.20									.90													1.20
Mission	Rio Grande																																0.13
Mont Belvieu	Coast	.34		1.14	.08		1.40			T.	.35	.05									T.	.17											3.53
Mountain View	Pecos										.13	.06								.10													0.29
Mount Blanco	Brazos											.53								*	.60												1.13
Nacogdoches[1]	Neches	.48			.17	1.44	.18			T.	T.		T.									T.												2.27

TABLE 2.—*Daily precipitation for October, 1910. District No. 8*—Continued.

Stations.	River basins.	Day of month.																															Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Texas—Cont'd.																																	
New Braunfels	Guadalupe			.37	.29						.50										1.36												2.52
Palestine	Trinity			.74	.24	.01				T.		T.									.07												1.06
Panter	Brazos		T.	.08	T.					T.	.23	.15								.63													1.09
Pearsall	Nueces			1.25	.02					.09	.29									.58													2.23
Pierce	Colorado			.24		.42					.95																						1.61
Plainview	Brazos			.1								.41								.11	.25												0.77
Port Lavaca	Coast		T.	1.38							1.52										.07												2.97
Post City	Brazos										.03	.80								.53	.06												1.42
Ricardo	Coast	.53		.05	.07		.05			.06																							0.76
Riverside	Trinity	T.	T.		.21	T.						T.																					0.21
Robert Lee	Colorado										.84	.35									.88												2.21
Rockland	Neches	.10		.28		.15																											0.53
Rossville	Nueces			.65	1.00					.12	.41										.60												2.78
Runge	San Antonio						.45																										0.45
Sabinal	Nueces			1.74	1.57						.60	.10									.80					.04							5.15
Salado	Brazos			.11	.04							2.35									.81												3.31
San Angelo	Colorado			.32							.90	.13								.13	.40												1.88
San Antonio	San Antonio		T.	.92	.75					.06	.56	.11								.24	.70					.01							3.35
San Augustine	Neches			T.	.01	.71				T.		.15	1.83								T.	.13											2.83
San Juanito	Coast				.03	.35	T.																			.85							1.23
San Marcos	Guadalupe				.88		.30					.90									1.53												3.61
San Saba	Colorado			.55	.10						.25	.36									1.10												2.36
Santa Gertrudes	Coast																																
Seymour	Brazos		.14									.12								.93	.78												1.97
Sligo	Colorado																																
Somerville	Brazos	T.		T.				.09	T.	T.	T.	T								T.		T.											0.09
Sonora	Rio Grande																																
Sugarland	Brazos																																
Sutherland Springs	San Antonio			.25	.23	.57					.07	.37									.15												1.64
Taylor	Brazos		T.	.91	.23					.86	.63	.79								.01	1.13												4.56
Temple	do				.13	.06	T.					.60									.74	.06												1.59
Theodore	Pecos										.15									.05													0.20
Thurber	Brazos			.31								.95								.35	.97												2.58
Tilden	Nueces			.80	.20		T.			T.	.30										1.43												2.73
Tivoli	Guadalupe																																0.00
Uvalde	Nueces			1.25	1.05					T.	.32										.31				.05								2.98
Valley Junction	Brazos					.20				.10		.08									.26	.30											0.94
Victoria	Guadalupe						.60				.30																						0.90
Waco	Brazos				T.	T.						T.									.66	.22											0.88
Waxahachie	Trinity				T.	T.							T.								.40	.04											0.44
Weatherford	do			.37	.02	.03						T.	.12							.06	.90												1.50
Wharton	Colorado						.25				.70	.93																					1.88
Wills Point	Sabine			.36	T.							T.	T.								.28												0.64
Zapata	Rio Grande				1.85		T.														.06					.11	T.						2.02

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No 8, Texas and Rio Grande Valley.*

Date.	Colorado.						New Mexico.												Texas.											
	Garnett.		San Luis.		Agricultural College.		Carlsbad.		Fort Stanton.		Mountainair.		Rosedale.		Roswell.		Santa Fe.		Santa Rosa.		Abilene.		Big Springs.		Brownsville.		Corpus Christi.		Del Rio.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	76	39	74	33	80	40	86	51	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
2	68	39	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
3	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
4	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
5	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
6	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
7	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
8	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
9	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
10	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
11	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
12	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
13	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
14	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
15	68	35	68	33	74	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
16	72	35	70	33	76	40	86	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
17	72	35	70	33	76	40	86	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
18	72	35	70	33	76	40	86	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
19	72	35	70	33	76	40	86	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
20	72	35	70	33	76	40	86	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
21																														
22																														
23																														
24																														
25																														
26	67	30	68	32	72	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
27	67	30	68	32	72	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
28	67	30	68	32	72	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
29	67	30	68	32	72	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
30	67	30	68	32	72	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
31	67	30	68	32	72	40	84	50	86	46	86	43	78	41	82	45	74	39	84	44	86	55	88	55	86	63	88	72	95	68
Mns	67.8	33.3	64.0	37.3	78.6	48.2	81.0	43.6	71.1	33.7	67.9	35.2	65.5	38.7	74.8	39.9	62.2	36.8	75.9	40.2	77.2	53.2	81.5	48.9*	82.8	63.9	79.5	64.5	81.8	56.4

Date.	Texas.																													
	Fort McIntosh.		Fort Stockton.		Fort Worth.		Galveston.		Hallettsville.		Houston.		Lufkin.		Palestine.		Plainview.		San Antonio.		Seymour.		Taylor.							
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.						
1	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
2	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
3	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
4	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
5	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
6	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
7	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
8	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
9	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
10	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
11	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
12	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
13	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
14	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
15	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
16	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
17	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
18	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
19	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
20	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
21	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
22	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
23	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
24	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
25	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
26	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
27	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
28	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
29	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
30	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
31	95	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						
Mns	91	72	95	68	94	68	88	74	94	68	94	68	94	68	94	68	94	68	94	68	94	68	94	68						

Climatological Data for October, 1910.

DISTRICT No. 9, COLORADO VALLEY.

FREDERICK H. BRANDENBURG, District Editor.
PATRICK MCDONOUGH, Acting District Editor.

GENERAL SUMMARY.

The weather conditions during October in the region drained by the Colorado were even finer than usual. In most respects the conditions closely resembled those common to September. High temperatures were persistent, and while killing frosts occurred they were not generally noted until the close of the second decade. Rains fell in districts where, as a general thing in October, the precipitation is in the form of snow.

The month opened with increasing cloudiness, due to a low that developed in Utah; rain followed on the 2d over the greater part of the drainage area, and sharp falls in temperature occurred in the central and northern parts of the district with the movement of the low center to the eastern slope. On the morning of the 3d high pressure with clear skies obtained over all but the extreme southwestern part of the district; and frosts, mostly light, were generally reported. Under the influence of a northern low, the pressure fell rapidly during the night of the 4th, followed quickly by a corresponding rise in pressure, some cloudiness, and but little precipitation. Frosts were noted in localities on the morning of the 4th. Uninterrupted stationary high pressure, with clear skies, then prevailed for nearly a week. From the 10th to the 18th low pressure areas exerted a controlling influence, although a few highs of slight intensity moved from the west across the northern part of the district. During the first few days of this period there were a few local rains, then followed general precipitation in the northern part of the district, lasting until the 20th, except in Arizona, where the rains were scattered. The anticyclone that appeared in the north on the morning of the 18th, moved south, and two days later its crest overlay the extreme northern part of the district. Snow fell generally in the mountain region of central Colorado and northwestern New Mexico, and hard freezing weather occurred, except in the southern parts of Arizona and adjacent region in New Mexico. The high pressure was slow in dissipating, and it was not until the 25th that disintegration set in, only to be followed within 36 hours by another high from the north, which gave a return to clear skies, lasting until the end of the month. During the last decade precipitation occurred at a few stations in Arizona.

TEMPERATURE.

The mean of the 121 stations reporting was 56.0°, or 1.1° above the normal. By subdivisions the means and departures were: Western Wyoming, 40.4°, +1.1°; western Colorado, 44.3°, +0.6°; eastern Utah, 50.4°, +2.3°; western New Mexico, 54.8°, +1.1°; Arizona, 64.9°, +0.9°; and southeastern Nevada, 59.6°. The highest monthly mean was 86.2° at Casa Grande, Ariz., and the lowest, 30.0°, at Corona, Colo.

Temperatures averaged slightly below the normal at the beginning of the month. In Arizona from the 4th to the 11th they were much above the normal, and the same is true of the central and northern parts of the district from the 7th to the 14th, inclusive. In southern Arizona, which was first to experience the change to cooler, temperatures were considerably below the normal from the 12th to the 21st, while in the central and northern parts of the district the cool period was shorter, extending from the 17th to the 22d, inclusive. The deficiency, however, was marked on the 19th, 20th, and 21st. During the last eight or nine days temperatures were again above the normal, especially in Arizona. By subdivisions the temperature extremes were: Western Wyoming, 84° and 4°; western Colorado, 90° and −5°; eastern Utah, 96° and 16°; western New Mexico, 98° and 5°; Arizona, 110° and 16°; southeastern Nevada, 101° and 27°. In the southern and central parts of the district the maximum temperatures recorded on the 8th or 9th are the highest of record for October.

PRECIPITATION.

The average precipitation for the 169 stations reporting was 1.00 inch, or 0.05 inch below the normal. By watersheds the means and departures were: Green, 1.38, +0.24; Grand, 1.78, +0.41; San Juan, 3.02, +1.01; Little Colorado, 0.56, −0.41; Gila, 0.22, −0.37; Mimbers, 0.31, −0.57; and Colorado, proper, 0.90, +0.44 inch. There were two periods of precipitation; the first beginning in Utah and Arizona on the 1st of the month, and ending in Colorado and Wyoming on the 4th. The other period extended from the 12th to the 20th and was of more importance, as precipitation was general in Colorado and Utah and fairly well distributed in the remainder of the district. On the 16th and 17th heavy snow fell in the mountains of Colorado the following being among the heavier 24-hour falls, expressed in water equivalents: Bedrock, 1.05; Cascade, 2.39; Craig, 1.10; Gladstone, 1.16; Ironton, 1.31; Lake City, 1.10; Montrose, 1.30; Pagosa Springs, 1.08; Silverton, 1.23; and Silverton (near), 2.50 inches. The greatest monthly amount was 6.77 inches at Cascade, Colo., while none occurred at four stations in New Mexico and four stations in Arizona. The greatest monthly snowfall was 68 inches at Corona, Colo. The average number of days with 0.01 inch or more of precipitation was 4.

MISCELLANEOUS.

The percentage of sunshine was below the normal in southwestern Colorado and central Arizona; elsewhere there was generally an excess. Grand Junction reported 76, Durango, 70; Flagstaff, 87; Phoenix, 84; and Yuma, 96 per cent of the possible.

The mean relative humidity reported was as follows: Grand Junction, 49; Durango, 58; Flagstaff, 50; Phoenix, 39; and Yuma, 44 per cent.

DUTY OF WATER.

By A. L. FELLOWS, Consulting Engineer.

Volumes already have been, and much more might be written regarding the "duty of water" in the arid regions. The subject has been discussed in the reports of The Division of Irrigation Inquiry, United States Department of Agriculture, in numerous agricultural college bulletins, and in many works on irrigation. A few of the underlying principles regarding the duty of water are:

1. By the term "duty of water," we mean that amount of water necessary to irrigate a given amount of land to the best possible advantage; thus, for example, under certain conditions, the duty of water upon a given tract of land may be 1 acre-foot per acre, under other conditions on another tract, it may be 2 acre-feet per acre, provided only that the best results under the existing conditions are obtained. In general, however, the term is somewhat loosely used and is often understood to mean the amount of water actually applied to land, whether such application is beneficial or not. Thus, it is stated in some of our irrigation works that the duty of water upon certain described tracts is as much as 15 acre-feet per acre and even more, though there is no possibility whatsoever that any such amount of water was actually used to good advantage upon such land.

2. The meaning of the term varies under an infinite number of conditions. Thus, when we are referring to water being taken from a natural running stream, we must take into consideration loss in transit by evaporation; where storage is practised, loss in laterals and in distributing ditches occurs, consequently it should

be clearly indicated whether the amount of water entering a given canal through its headgate, the amount reaching a given reservoir, the amount drawn from that reservoir, the amount flowing through an outlet canal, the amount at the head of a lateral, or the amount actually distributed to the growing crops, is meant.

It will vary with the different kind of crops; alfalfa requiring for an entire season more than grain or potatoes. It will also vary with the aridity of the region, humidity of the atmosphere, amount of rainfall, cloudy weather, and other climatic conditions, and particularly with the individual user.

3. As is shown by careful experiments made at various agricultural colleges, such as Fort Collins, Colo.; Provo, Utah; and Laramie, Wyo., results varying from fair to excellent for such crops as alfalfa, potatoes, sugar beets, small fruits, grains, etc., are obtained by duties of water from .75 of an acre-foot per acre up to 3 or more acre-feet per acre.

FOREST FIRES OF 1910 AND THEIR CAUSES.

By L. N. JESUNOFSKY.

The burning of large areas of forests in the Southwest during April, May, and June, and in the Northwest and the upper Missouri and upper Mississippi valleys during July and August of the present year, whereby many lives were lost and great damage to timber resulted, has occasioned much discussion upon the methods of protection from forest fires. The principal agency attributable as the cause of these forest fires was the great deficiency in rainfall over nearly the entire western country, beginning early in the spring and continuing throughout the summer months. The averages of the accumulated departures in precipitation over the upper Mississippi Valley during consecutive monthly periods, from March 1 to August 29, 1910, as deduced from the National Weekly Weather Bulletin, were as follows: From March 1 to April 25, −2.4 inches; to May 30, −3.8 inches; to June 27, − 6.6 inches; to July 25, − 7.6 inches; to August 29, − 9.5 inches.

For the upper Missouri Valley, for the same periods, the averages of the accumulated departures were: From March 1 to April 25, − 1.3 inch; to May 30, − 2.7 inches; to June 27, −4.5 inches; to July 25, −5.9 inches; to August 29, −7.4 inches.

For the Rocky Mountain region, during the same period, the averages of the accumulated departures were: From March 1 to April 25, −0.9 inch; to May 30, −1.5 inch; to June 27, −2.1 inches; to July 25, −2.6 inches; to August 29, −3.1 inches.

For the Southwest, during the same period, the averages of the accumulated departures were: From March 1 to April 25, −0.1 inch; to May 30, −0.7 inch; to June 27, −0.9 inch; to July 25, −1.2 inch; to August 29, −1.2 inch.

It is a significant fact that no loss of life occurred in the forest fires of Arizona and New Mexico during the past spring and summer, a condition, due in part, however, to the less density of population in those Territories as compared with other sections where such fires occurred.

TABLE 1.—*Climatological data for October, 1910. District No. 9, Colorado Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Battle Mountain	Carbon	7,300																		U. S. Forest Service.
Daniel	Uinta	6,740	11	39.1	+ 1.1	76	10	4	26	56	0.42	− 0.28	0.25	T.	2	17	13	1	nw.	J. M. Van Dervort.
Eden	Sweetwater	6,577	2	41.6	.....	84	10	9	28	52	1.02	.....	0.31	0.5	5	16	8	7	w.	Eden Valley L. & I. Co.
Green River	...do	6,083	5	45.0	+ 1.0	86	10	13	28	58	0.79	+ 0.17	0.35	0.0	8	20	3	8	w.	Geo. W. Maxon.
Pinedale	Fremont	7,167	4																	U. S. Forest Service.
Rambler	Carbon	9,232	...																	J. C. Fothergill.
Willow Creek Cabin	Freemont	7,500	2																	J. L. Allen.
Colorado.																				
Ashcroft	Pitkin	9,483	8	38.8	.....	76	10	?	21	45	1.88	.....	0.38	12.0	9	...	...	...	...	Dan McArthur.
Bed Rock	Montrose										1.30	.....	1.05	0.0	3	11	14	6	w.	W. B. Weybright.
Breckenridge	Summit	9,536	20	36.5	+ 1.1	73	9	− 4	20	52	0.85	− 0.53	0.26	8.0	6	11	16	4	nw.	Mrs. J. G. Thompson.
Cascade	San Juan	8,900	4								6.77	.....	2.39	6.0	10	20	5	6	.....	San Juan P. & W. Co.
Chromo	Archuleta	7,500	4	45.6[b]	.....	85	8†	0	24	66[b]	1.67	.....	0.85	0.0	3	...	...	...	sw.	Lawrence Nolan.
Cochetopa	Saguache	9,088	...								1.86	.....	0.90	7.0	5	16	10	5	w.	Bessie McDonough.
Collbran	Mesa	6,000	17	48.7	.....	79	9†	20	20†	37	2.25	+ 1.11	0.78	0.0	7	22	2	7	sw.	A. A. Wood.
Columbine	Routt	8,766	...								1.13	.....	0.45	9.0	6	14	13	4	sw.	Mrs. M. A. Caron.
Columbine Ranch	Delta	6,925	...								2.38	.....	0.75	T.	5	21	4	6	s.	Geo. W. Wade.
Corona	Grand	11,660	3	30.0	.....	60	9	2	21	28	5.16	.....	1.60	68.0	7	...	...	...	w.	U. S. Weather Bureau.
Crawford (near)	Montrose	6,600	...	44.3	.....	81	9	20	21	37	1.72	.....	0.67	1.0	8	22	2	7	.....	C. W. Roe.
Crested Butte	Gunnison	8,867	...	37.8	.....	73	1	11	24	57	1.70	.....	0.60	8.8	6	20	7	4	.....	Charles L. Ross.
De Beque	Mesa	4,935	...								1.75	.....	0.83	0.0	6	24	1	6	.....	C. M. Paine.
Delta	Delta	4,965	19	50.6	+ 0.5	90	11	23	24	60	1.30	+ 0.62	0.77	T.	3	18	8	5	.....	E. M. Getts.
Dillon	Summit	8,800	1																	Harry T. Hamilton.
Dolores	Montezuma	6,500	1																	Geo. R. Simmons, jr.
Durango	La Plata	6,534	17	48.7	− 0.1	83	9	19	21	46	2.91	+ 1.40	0.85	3.4	9	15	10	6	nw.	U. S. Weather Bureau.
Eagle	Eagle	6,598	5	41.8	.....	83	10	10	21†	58	0.57	.....	0.20	0.0	5	24	1	6	w.	J. M. Witteman.
Eureka	San Juan	10,000	3																	San Juan P. & W. Co.
Fraser	Grand	8,560	...	34.6	.....	75	8†	− 3	20	61	0.89	.....	0.31	6.5	5	20	7	4	w.	L. D. C. Gaskill.
Fruita	Mesa	4,510	11	50.6	+ 0.8	88	1	22	28†	53	1.59	.....	0.85	0.0	5	21	5	5	.....	J. B. Willsea.
Gladstone §	San Juan	10,400	3								3.51	.....	1.16	.....	8	19	5	7	ne.	San Juan P. & W. Co.
Glenwood Springs (near)	Garfield	5,823	12	46.9	.....	88	8	14	28	60	0.90	− 0.18	0.30	0.0	7	22	1	8	w.	E. A. O'Neil.
Grand Junction	Mesa	4,608	19	53.0	− 0.3	85	10	27	29	43	1.26	+ 0.33	0.97	0.0	6	20	6	5	nw.	U. S. Weather Bureau.
Grandlake	Grand	8,153	2								0.60	.....	0.40	T.	3	22	2	7	.....	Mrs. Belle Kauffman.
Grand Valley	Garfield	5,089	18	51.2	+ 1.3	89	10	18	29	56	2.02	+ 0.97	0.74	0.0	6	22	2	7	.....	David Evans.
Gunnison	Gunnison	7,670	17	41.0	− 0.4	78	10†	7	29	65	0.90	+ 0.29	0.46	2.5	5	24	5	2	.....	Clarence Adams.
Horsefly	Montrose	8,700	...								2.58	.....	0.90	7.2	6	21	5	5	sw.	L. J. Finch.
Ironton	Ouray	10,000	...								3.95	.....	1.31	14.5	9	14	10	7	ne.	P. H. Foley.
Kremmling (near)	Grand	7,337	1																	H. A. Howe.
Lake City	Hinsdale	8,686	5	43.0	.....	78	10	9	21	50	2.43	.....	1.10	5.7	8	18	8	5	s.	J. F. Maurer.
Lay	Routt	6,190	16																	A. G. Wallihan.
Leal	Grand	8,750	...																	L. J. Wade.
Lujane	Montrose	6,620	4																	U. S. Reclamation Service.
Mancos	Montezuma	6,960	11	49.8	+ 1.7	83	9	20	21	49	2.43	+ 1.52	0.76	1.0	7	17	9	5	nw.	B. M. Krumpanitzky.
Marble	Gunnison	7,951	1	43.2	.....	82	10	10	21	56	2.31	.....	0.69	5.0	10	21	2	8	ne.	Homer Harrington.
Marshall Pass	Saguache	10,846	7								0.36	.....	0.14	8.5	3	20	8	3	w.	William D. Lillard.
Meeker	Rio Blanco	6,182	18	44.8	+ 1.0	83	9	10	28	57	1.98	+ 0.67	.....	T.	5	23	3	5	sw.	T. Baker.
Montrose (near)	Montrose	5,811	21	45.6	− 2.8	85	9	18	21†	53	1.92	+ 1.11	1.30	0.0	7	23	3	5	.....	R. Butterfield.
Nast	Pitkin	7,953	...	41.2	.....	76	8†	10	20	46	1.40	.....	0.60	7.2	6	23	0	8	w.	Arthur Hanthorn.
Pagoda	Routt	6,500	19	46.6	+ 2.4	90	10	11	20	61	1.60	− 0.01	0.72	0.0	5	24	2	5	.....	Shaw Brothers.
Pagosa Springs	Archuleta	7,108	3	44.6	.....	85	8	− 5	21	59	2.42	.....	1.08	5.0	7	18	5	8	.....	E. T. Walker.
Paonia	Delta	5,694	15	50.8	.....	83	9	27	28	38	1.76	.....	0.68	0.0	6	18	7	6	sw.	J. M. Underwood.
Parshall	Grand		1																	F. A. Field.
Pitkin	Gunnison	9,500	1								1.06	.....	0.74	1.3	5	15	10	6	s.	Mrs. Maggie Cammann.
Rangely	Rio Blanco	5,050	11	47.8	+ 1.6	85	10	18	29	56	1.39	+ 0.47	0.63	0.0	5	14	8	9	w.	Mrs. C. P. Hill.
Redcliff	Eagle	8,695	15								1.69	+ 0.32	0.55	5.5	4	19	4	8	.....	Dorothea Greiner.
Rico	Dolores	8,824	8								4.55	.....	1.21	10.0	8	20	5	6	sw.	Clinton B. Smith.
Rifle	Garfield	5,437	...																	Horace Mann.
River Portal	Montrose	6,570	4	47.2	.....	85	8†	17	20	51	1.95	.....	0.69	T.	4	23	1	7	.....	U. S. Reclamation Service.
Sapinero (near)	Gunnison	8,125	8	41.0	.....	76	9	6	21	48	2.45	.....	0.61	8.1	9	23	3	5	w.	W.F. Irving.
Shoshone	Garfield	6,110	...	48.4	.....	75	9†	24	21†	35	1.04	.....	0.47	T.	6	22	1	8	.....	Central Colo. Power Co.
Silverton (1)	San Juan	9,285	6	42.4	.....	79	8†	10	21	55	3.47	.....	1.23	11.0	9	19	2	10	s.	A. P. Root, jr.
Silverton (near) §	...do	9,400	3	37.2	.....	71	8†	5	21	48	4.86	.....	2.50	4.5	4	22	3	6	sw.	San Juan P. & W. Co.
Spruce Lodge	Grand	9,600	2								1.74	.....	0.50	12.0	8	...	...	...	.....	H. J. Wills.
Steamboat Springs	Routt	6,683	7	41.3	.....	89	10	6	28	71	1.87	.....	0.96	T.	4	25	2	4	.....	M. E. Houston.
Tacoma §	La Plata	7,300	3	47.6	.....	82	9	19	21	45	4.01	.....	1.20	.....	7	21	1	9	.....	San Juan P. & W. Co.
Terminal Dam §	...do	8,300	3								3.25	.....	0.86	9.5	9	21	4	6	n.	Do.
Terrill's Ranch	Mesa	7,000	...								1.39	.....	0.84	0.0	4	23	2	6	sw.	A. F. Terrill.
Uncompahgre Plateau	Montrose	8,400	...																	Martin Esser.
Whitepine	Gunnison	9,500	10																	C. E. Macy.
Yampa (near)	Routt	8,000	1								0.95	.....	0.80	0.0	4	21	5	5	n.	Percy A. Hughes.
Utah.																				
Baker	San Juan	7,560	1																	Maude A. Palmer.
Basin	Grand	9,500	1																	E. H. Wolf.
Castle Dale	Emery	5,500	11	47.8[f]	+ 0.3	83[f]	10†	20[f]	22	51[f]	0.85	+ 2.20	0.45	0.0	3	...	...	...	.....	James Jeffs.
Elkhorn	Unita	6,637	...																	Forest Supervisor.
Emery	Emery	6,260	10	50.7	+ 4.7	82	11	28	30	51	0.95	+ 0.30	0.50	0.0	2	17	0	14	n.	H. C. Wickman.
Escalante	Garfield	5,700	10	50.6	+ 0.2	81	8†	22	22	39	1.31	+ 0.54	0.65	0.0	4	25	0	6	.....	Geo. H. Barney.
Fort Duchesne	Uinta	5,000	22	47.8	+ 1.4	83	10	17	29	52	0.91	+ 0.33	0.47	0.0	5	25	0	6	s.	Post Surgeon.
Fruitland	Wasatch			43.2	.....	76	10	16	28	45	1.84	.....	0.62	.....	8	17	6	8	se.	J. Peter Naab.
Grayson	San Juan	5,750	6																	Joseph A. Lyman.
Green River	Emery	4,080	13	55.5	+ 3.2	88	3†	22	29	53	0.30	+ 0.10	0.19	0.0	3	26	4	1	.....	B. F. Miller.
Hanksville	Wayne		1																	F. J. Weber.
Hite	Garfield	3,000	11	60.4	.....	91	10	33	29	46	0.67	.....	0.22	0.0	5	21	7	3	.....	John P. Hite.
La Sal	San Juan	7,000	10	48.2	+ 3.1	81[a]	9†	16[a]	20	38[a]	1.03	+ 0.37	0.63	0.0	5	20	6	5	.....	Chas. L. Glassmire.
Loa	Wayne	7,000	18																	Michael Hansen.
Manila	Unita										1.22	.....	0.55	T.	7	16	5	10	.....	Daniel M. Nelson.
Moab	Grand	4,000	21	54.4	+ 1.1	90	1	24	29	42	1.17	+ 0.51	0.86	0.0	3	20	4	7	.....	Henry Crouse.
Monticello	San Juan		2																	D. B. Perkins.
Orderville	Kane		1								1.35	.....	0.55	0.0	5	...	...	...	.....	F. A. Porter.
Price	Carbon	5,557	...																	H. C. Smith.
Ranch	Kane	6,700	9	47.5	.....	81	10	21	20	48	2.97	.....	1.26	.....	6	25	0	6	w.	J. W. Seaman.
Saint George	Washington	2,880	29	59.8	+ 5.0	96	9†	29	22	57	0.91	+ 0.42	0.64	0.0	3	18	9	4	.....	Joseph T. Atkin.
Scofield	Carbon	7,625	2																	O. E. Jorgensen.
Springdale	Washington		3																	Hattie Flanigan.
Sunnyside	Carbon	5,280	5								2.29	.....	0.80	T.	6	...	...	...	.....	Henry Cullum.
Teasdale	Wayne	7,000	2	47.4	.....	75	1	23	20	32	1.68	.....	0.39	0.0	4	21	0	10	.....	Josiah Shurts.
Theodore	Wasatch	5,507	5	44.8	.....	78	8†	16	29	40	1.52	.....	0.60	0.0	5	19	6	6	.....	M. M. Smith.

TABLE 1.—*Climatological data for October, 1910. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Utah—Cont'd.																				
Tropic	Garfield	7,000	13	50.7	+ 3.6	84	10	20	21	51	2.18	+ 1.50	1.24	0.0	5	18	11	2	nw.	E. P. Bolton.
Trout Creek Ranger	Unita	9,200									2.85		0.60	20.0	8	17	7	7		Forest Supervisor.
Vernal	do	5,050	15	47.4	+ 0.4	83	9†	18	28	51	1.28	+ 0.42	0.65	0.0	6	22	7	2		S. P. Trim.
New Mexico.																				
Alma	Socorro	5,500	14	58.0	+ 1.8	98	1	24	22	59	0.55	− 0.94	0.29	0.0	3	15	15	1	se.	M. A. Balke.
Aragon	do	5,856	3	48.8		84	8	12	21	54	1.03		0.65	0.0	2	22	9	0	sw.	John R. Milligan.
Blackrock	McKinley	6,500	2	52.4		87	8	24	21†	51	0.52		0.34	0.0	2	20	10	1		Wm. J. Oliver.
Bloomfield	San Juan	5,500	15	50.9	+ 0.9	89	9	22	28	54	1.03	+ 0.33	0.37	T.	6	19	8	4	sw.	Fred Le Clerc.
Cambray	Luna	4,215	11								T.	− 0.63	T.	0.0	0	19	2	10	e.	Southern Pacific Co.
Columbus	do	4,054	1			87	7	27	21		0.03		0.03	0.0	1	20	0	11	nw.	El Paso & Southwest. R.R.
Deming	do	4,333	33	62.3		95	1†	22	20	55	0.00	− 0.67	0.00	0.0	0	15	9	7	w.	Southern Pacific Co.
Dulce	Rio Arriba	6,767	3	45.4	+ 0.7	87	8	5	21	62	2.24	+ 0.76	0.70	12.2	8	19	7	5	w.	G. H. Blakeslee.
Fort Bayard	Grant	6,152	35	59.0	+ 2.1	85	5	30	22	38	0.43	− 0.66	0.28	0.0	2				nw.	U. S. Gen'l. Hospital.
Fort Wingate	McKinley	6,997	46	51.0	+ 1.0	85	9	20	21	50	0.80	− 0.21	0.20	T.	6	10	9	12	sw.	Medical Corps, U. S. A.
Fruitland	San Juan	4,800	17	52.0	+ 0.9	90	9	23	29	58	1.45	+ 1.03	0.40	0.0	7	17	8	6	nw.	Cyril James Collyer.
Gage	Luna	4,486	3			92	2	33	27	49	0.00	− 0.32	0.00	0.0	0				w.	Southern Pacific Co.
Gila (near)	Grant	4,470	11	59.0	+ 0.5	94	1†	26	21	63	0.41	− 0.68	0.28	0.0	2					T. J. Clark, sr.
Gila Planting Station	do	6,475		56.2		84	8	28	21	40	0.64		0.25	0.0	5	26	3	2	s.	U. S. Forest Service.
Hachita	do	4,504	1								T.		T.	0.0	0	21	9	1	se.	El Paso & Southwest. R.R.
Haynes	Rio Arriba	6,600									2.26		0.52	2.5	6	24	2	5	nw.	Dr. John Roger Haynes.
Hermanas	Luna	4,451	1								0.00		0.00	0.0	0	27	4	0	se.	El Paso & Southwest. R.R.
Lordsburg	Grant	4,245	10	62.8	+ 1.0	94	8	33	21†	56	0.00	− 0.64	0.00	0.0	0	15	12	4	e.	Southern Pacific Co.
Luna	Socorro	7,300	5																	C. B. Martin.
Mimbres	Grant	5,007	5								0.80		0.40	0.0	3	22	7	2	se.	Chas. Dennis.
Pratt	do	4,415	1								0.00		0.00	0.0	0	26	5	0	w..	El Paso & Southwest. R.R.
Putnam	San Juan	6,200																		Miss Elenor L. Quick.
Redrock	Grant	4,150	5								0.27		0.25	0.0	2	20	7	4		Robert H. Woods.
Rodeo	do	4,118	1								0.00		0.00	0.0	0	31	0	0		ElPaso & Southwest. R.R.
Rosa	Rio Arriba	6,000	5																	B. A. Candelario.
Arizona.																				
Alliares Ranch	Cochise	4,184	14								0.11	− 0.25	0.03	0.0	2	21	7	3	nw.	Thos. Allaire.
Arizona Canal Dam	Maricopa	1,372	17	73.7	+ 1.0	103	8	50	13	38	0.02	− 0.08	0.02	0.0	1	14	14	3	s.	U. S. Reclamation Service.
Aztec	Yuma	492	11	76.0	− 0.3	108	9	47	23	49	0.19	+ 0.06	0.16	0.0	2	23	1	7	sw.	Southern Pacific Co.
Benson	Cochise	3,523	30	63.2	− 2.2	90	1†	34	17	51	0.00	− 0.64	0.00	0.0	0	20	2	0	e.	Southern Pacific Co.
Bisbee	do	5,500	29	61.6	− 0.1	81	8	37	21	29	0.24	− 0.84	0.24	0.0	1	27	2	2	w.	Rev. J. G. Pritchard.
Bonita	Graham	4,916									0.12	− 0.69	0.11	0.0	2	22	8	1	sw.	A. Johnson & Co.
Bowie	Cochise	3,756	34	68.1	+ 3.5	95	1	41	18†	44	T.	− 0.60	T.	0.0	0	24	5	2	e.	Southern Pacific Co.
Buckeye	Maricopa	980	19	71.3	+ 2.4	103	8†	40	13†	56	0.02	− 0.40	0.02	0.0	1	29	2	0	sw.	H. E. Kell.
Camp Verde	Yavapa	3,160																		T. R. Gabbard.
Canille	Santa Cruz	5,225	1								0.05		0.05	0.0	1	13	16	2	sw.	R. A. Rodgers.
Casa Grande	Pinal	1,396	29	82.6	+ 9.6	106	11†	59	10	46	0.00	− 0.31	0.00	0.0	0	14	12	5	sw.	Southern Pacific Co.
Cave Creek	Maricopa	1,520	3	69.8		104	9	41	23	51	0.19		0.15	0.0	2	22	9	0		E. A. Howard
Chin Lee	Apache	6,090	2	51.7		90	2	19	22	52	0.75		0.42	0.0	5	16	8	7	n.	Fr. L. Ostermann, O. F. M.
Chlarsons Mill	Graham	8,000	3	50.8		71	3	25	18	37	0.25		0.22	0.0	4	22	8	1		H. R. Chlarson.
Clifton	do	3,584	20	69.7		95	8	44	21	42	0.26	− 0.70	0.23	0.0	2	29	2	0		P. Reisinger.
Cline	Gila	2,300	11																	W. M. Clanton.
Cochise	Cochise	4,219	12	64.4	+ 1.0	90	1	34	22	49	T.	− 0.33	T.	0.0	0	20	11	0	sw.	Southern Pacific Co.
Columbia	Yavapai	1,900	10	75.0	+ 3.7	105	8	48	14	37	0.27	− 0.28	0.25	0.0	2	23	5	3	se.	M. J. Nolan.
Congress	do	3,688	14	69.4	+ 0.1	95	8	48	15	26	0.82	+ 0.23	0.58	0.0	2	17	11	3	sw.	Congress Mine.
Courtland	Cochise	4,543	1								0.03		0.03	0.0	1	10	21	0	sw.	El Paso & Southwest. R.R.
Dos Cabezos	do	5,250	2	60.4		95	14	27	17	53	0.00		0.00	0.0	0	27	4	0	w.	N. Erickson.
Douglas	do	3,930	7	64.5		92	1	33	17	52	0.18		0.18	0.0	1	26	5	0	sw.	Dr. F. T. Wright.
Dudleyville	Pinal	2,204		65.4	− 0.4	95	10	37	21†	53	0.05	− 0.70	0.02	0.0	3	18	12	1	sw.	G. F. Cook.
Fairbank	Cochise	3,862	1								0.14		0.14	0.0	1	27	3	1		El Paso & Southwest, R.R
Flagstaff	Coconino	6,907	18	47.2	+ 2.5	81	9	16	21	48	0.54	− 1.35	0.29	0.0	6	17	10	4	e.	U. S. Weather Bureau.
Florence	Pinal	1,504	11	69.4	+ 1.5	107	7	43	16†	54	0.11	− 0.39	0.09	0.0	2	17	14	0	e.	Pacific & Eastern R. R.
Fort Apache	Navajo	5,200	39	57.0	+ 1.6	86	9	24	20	49	0.06	− 1.09	0.02	0.0	4	27	2	2	sw.	Post Surgeon, U. S. A.
Fort Huachuca	Cochise	5,100	25	61.3	− 1.5	89	8	30	17	49	0.20	− 0.47	0.20	0.0	1	28	3	0	nw.	Post Surgeon, U. S. A.
Fort Mohave	Mohave	604	37																	A. F. Duclos.
Gilabend	Maricopa	737	20	73.4	+ 0.5	103	8	44	17	45	0.08	− 0.27	0.06	0.0	2	25	6	0	sw.	Southern Pacific Co.
Globe	Gila	3,525	9	64.6		88	9	41	17	40	0.18		0.10	0.0	4	15	16	1	e.	Dr. B. G. Fox.
Grand Canyon	Coconino	6,866	7																	Grand Canyon Ry.
Greer	Apache	9,200	6								0.67		0.35	0.8	4	21	7	3		Mrs. M. Butler.
Hereford	Cochise	4,180	1								0.05		0.05	0.0	1	25	0	6	s.	El Paso & Southwest. R.R.
Holbrook	Navajo	5,069	20	55.1	+ 0.4	90	8†	21	21	53	0.09	− 0.56	0.05	0.0	2	27	0	4	sw.	T. Larson.
Intake	Gila	2,230	5								0.07		0.06	0.0	2	27	0	4	w.	A. J. Robinson.
Jerome	Javapai	4,743	13	64.4	+ 1.5	92	9	42	21	30	0.81	− 0.15	0.38	0.0	2	23	6	2	w.	Dr. L. A. Hawkins.
Keams Canyon	Navajo	6,600	7	52.2		83	9	25	21†	46	0.84		0.35	0.0	4	16	11	4	ne.	L. R. Ballard.
Kingman	Mohave	3,326	9	64.8		99	8	32	13	49	0.65		0.23	0.0	4	18	11	2	ne.	J. R. Gooding.
Lewis Springs	Cochise	4,029	1								0.02		0.02	0.0	1	28	3	0		El Paso & Southwest. R.R.
Maricopa	Pinal	1,186	33																	Southern Pacific Co.
Mesa	Maricopa	1,244	16	69.8	0.0	103	7	42	16†	48	0.13	− 0.33	0.11	0.0	2	23	7	1	sw.	C. L. Diehl.
Mohawk Summit	Yuma	538	10	73.8	− 2.0	103	3†	50	6†	53	T.	− 0.19	T.	0.0	0	27	3	1	e.	Southern Pacific Co.
Naco	Cochise	4,579	1								0.24		0.24	0.0	1	26	5	0	w.	El Paso & Southwest. R.R.
Natural Bridge	Gila	4,990	21								0.42	− 0.83	0.25	0.0	2	18	11	2	sw.	D. G. Goodfellow.
Nogales	Santa Cruz	3,830																		Wallace & Summerhayes.
Oracle	Pinal	4,500	18	65.4	+ 1.7	94	8	42	17	41	0.29	− 0.48	0.23	0.0	3	20	9	2	sw.	W. H. Winters.
Osborn	Cochise	4,676	1								0.25		0.25	0.0	1	27	3	1	w.	El Paso & Southwest. R.R.
Paradise	do	3,940	3	59.2		87	24	26	21	51	T.		T.	0.0	0	15	13	3	se.	J. C. Hancock.
Parker	Yuma	345	13	72.5	+ 0.5	110	7†	32	16	60	0.00	− 0.20	0.00	0.0	0	25	6	0	sw.	Dr. H. V. King.
Payson	Gila	5,500	2	57.6		89	8	24	21	50	0.94		0.64	0.0	2	24	0	7	e.	M. McDonald.
Phoenix (1)	Maricopa	1,108	15	72.2	+ 2.0	102	8	45	17	43	0.18	− 0.17	0.13	0.0	2	19	12	0	e.	U. S. Weather Bureau.
Pinal Ranch	Pinal	4,520	16								0.22	− 0.86	0.09	0.0	3	20	9	2		Irion & Craig.
Pinto	Apache	5,660	5								0.43		0.33	0.0	2	15	13	3	sw.	Mrs. C. F. Henning.
Prescott	Yavapai	5,320	42	54.2	− 0.1	88	9	21	21	47	1.19	− 0.42	0.60	0.0	3	24	4	3		Dr. J. W. Flinn.
Quartzsite	Yuma	800	3	70.9		107	9	42	13	50	0.19		0.10	0.0	2	24	7	0	n.	W. E. Scott.
Redrock	Pinal	1,856	3	73.6		100	6†	44	21	44	0.03		0.03	0.0	1	10	20	1	w.	W. J. Crowell.
Roosevelt	Gila	2,175	6	70.3		96	6†	43	21	38	0.30		0.12	0.0	4	21	10	0	se.	W. A. Schoenfeld.
Sacaton	Pinal	1,280	3	71.9		107	8	40	22	52	0.15		0.13	0.0	2	24	7	0		E. W. Hudson.
Saint Johns	Apache	5,650	9	54.5		92	9	24	21†	55	0.90		0.80	0.0	2	17	6	8	sw.	A. Shreeve.
Saint Michaels	do	6,950	23	50.2	+ 3.3	85	8	21	21†	52	1.13	+ 0.47	0.40	0.0	4	19	0	12	sw.	Rev. A. Weber, O. F. M.
Salome	Yuma	1,875	3	64.1		99	8	36	11	45	0.19		0.12	0.0	3	18	10	3	s.	Mrs. M. B. Swartz.
San Carlos	Gila	2,456	29	65.8	+ 1.3	97	8	35	22	57	0.95	+ 0.09	0.48	0.0	4	21	9	1	e.	F. S. Thomas.
San Simon	Cochise	3,609	25																	Southern Pacific Co.
Seligman	Yavapai	5,219																		C. W. Dougherty.
Sentinel	Maricopa	685	12	74.4	+ 1.4	108	9	48	17	46	T.	− 0.11	T.	0.0	0	27	4	0		Southern Pacific Co.
Showlow	Navajo	6,300	7																	Miss Zora Hall.

TABLE 1.—*Climatological data for October, 1910. District No. 9*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Arizona—Cont'd.																				
Silverbell	Pima	2,650	5	75.3	.....	99	6	52	13	29	0.08	.....	0.07	0.0	2	26	4	1	w.	Imperial Copper Co.
Snowflake	Navajo	5,644	1	52.4	.....	88	9	24	21	54	0.64	.....	0.41	0.0	2	10	16	5	n.	W. J. Flake.
Supai	Coconino	3,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. E. Coe.
Tempe	Maricopa	1,165	6	70.5	.....	102	8	43	17	50	0.09	.....	0.09	0.0	1	28	3	0	ne.	F. H. Simmons.
Thatcher	Graham	2,800	7	66.3	.....	96	4	35	17	50	0.04	.....	0.03	0.0	2	22	9	0	se.	Prof. J. H. Larson.
Tombstone	Cochise	4,550	16	63.9	− 0.3	87	8	40	16	34	0.09	− 0.28	0.09	0.0	1	26	5	0	.....	F. N. Walcott.
Truxton	Mohave	4,197	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	S. M. Atkinson.
Tuba	Coconino	4,500	11	54.4	.....	85	7†	24	22	51	0.15	.....	0.07	0.0	3	12	13	6	n.	G. H. Kraus.
Tucson	Pima	2,390	31	70.4	+ 0.9	101	8	37	17	47	0.04	− 0.48	0.02	0.0	2	9	21	1	nw.	University of Arizona.
Vail	...do	3,421	12	69.0	− 1.3	98	8	34	17	47	0.05	− 0.13	0.04	0.0	2	23	6	2	s.	Southern Pacific Co.
Walnut Grove	Yavapai	3,649	20	.....	.....	.....	.....	.....	.....	.....	0.70	− 0.02	0.60	0.0	2	20	11	0	.....	J. O. Carter.
Wickenburg	Maricopa	2,072	11	66.6	+ 1.5	109	8	40	13	55	0.03	− 0.12	0.02	0.0	2	25	3	3	w.	Santa Fe, Presc't & Phoenx.
Willcox	Cochise	4,164	30	61.4	− 0.9	90	1†	33	17†	52	0.12	− 0.43	0.12	0.0	1	17	0	14	s.	Southern Pacific Co.
Williams	Coconino	6,750	11	54.0	+ 0.6	85	8	24	21	46	0.37	− 0.67	0.19	0.0	3	22	8	1	sw.	E. J. Nordyke.
Winslow	Navajo	4,853	7	55.9	.....	91	9	22	21	54	0.03	.....	0.03	0.0	1	23	3	5	.....	J. F. Bauer.
Yarnell	Yavapai	4,700	12	.....	.....	.....	.....	.....	.....	.....	0.70	− 0.04	0.50	0.0	2	20	8	3	s.	E. L. Bartholomew.
Yuma	Yuma	141	31	73.2	− 0.2	106	8	44	13	46	0.07	− 0.12	0.07	0.0	1	29	2	0	w.	U. S. Weather Bureau.
Nevada.																				
Caliente	Lincoln	4,407	....	53.5	.....	85	10	27	13	51	0.08	.....	0.04	0.0	3	23	7	1	ne.	Agent Salt Lake Route.
Las Vegas	Clark	2,033	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Salt Lake Route.
Logan	...do	1,700	3	65.8	.....	101	8	37	21†	51	0.52	.....	0.37	0.0	2	20	5	6	n.	Ray. M. Filcher.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
| Estimated by observer.
|| Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 9, Colorado Valley.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Battle Mountain	Snake																																
Daniel	do		T.		.25									.02		.15																0.42
Eden	Green		.22											.19			.01			.29	.31											1.02
Green River	do		.12		.01									.05		.02			.22	.35	.02											0.79
Pinedale	do																			*												
Rambler	Snake																															
Willow Creek Cabin	Green																															
Colorado.																																
Ashcroft	Grand		.20	.02											.20	.10	.38	.31	.22	.33	.12											1.88
Bed Rock	Dolores				.22												1.05		.03													1.30
Breckenridge	Grand					.08									.11	.08	.12	.20	T.	.26												0.85
Cascade	San Juan		.69										T.	.08	.44	.42	2.39	.36	.03	.52	.02										1.82	6.77
Chromo	do		.12														.85				.70											1.67
Cochetopa	Gunnison														T.	.02	.90	.15	.46	.33												1.86
Collbran	Grand		.53	T.											.10	.03	.78	.21	.55	.05												2.25
Columbine	Yampa		.35		.08										.07		.05	.45	.13													1.13
Columbine Ranch	Gunnison		.75											.38			.72	.29	.24	T.												2.38
Corona	Grand		T.	.16		.30									T.	.20		.50	.90	1.60	1.50											5.16
Crawford (near)	Gunnison		.12												.36	.06	.67	.10	.10	.19	.12											1.72
Crested Butte	do		.20												.20	.20	.60		.10	.40												1.70
De Beque	Grand		.32	.18													.83	.11	.13	.18												1.75
Delta	Gunnison														.23	.30	.77				T.											1.30
Dillon	Grand																															
Dolores	Dolores																															
Durango	San Juan	.05	.27									T.			.17	.44	.65	.40	.03	.52	.31											2.91
Eagle	Grand															.12	.15	.20	.05	.05												0.57
Eureka	San Juan																															
Fraser	Grand		.10												.06			.20	.31	.22												0.89
Fruita	do		.33												T.	.09	.85	.12	.20													1.59
Gladstone	San Juan												.03	.04	.76	.40	1.16	.59	.22	.31	T.											3.51
Glenwood Springs (nr)	Grand		.20												.30	.05	.07	.08	.10	.10												0.90
Grand Junction	do		.08									T.			.01	.58	.41	.06	.12													1.26
Grandlake	do		T.												T.		.20	.40		T.												0.60
Grand Valley	do		.68												T.	.03	.74	.28	.27	.02												2.02
Gunnison	Gunnison														.06		.12	.46		.14	.12											0.90
Horsefly	do		.45												.90	.60	.51	.03	.07													2.58
Ironton	do		.50											.02	.34	.27	1.31	.25	.23	.37	.36											3.95
Kremmling (near)	Grand																															
Lake City	Gunnison		.16												.21	.16	1.10	.27	.04	.28	.21											2.43
Lay	Yampa																															
Leal	Grand																															
Lujane	Gunnison																															
Mancos	San Juan						.05								.17	.55	.76	.30	.10	.50	T.											2.43
Marble	Grand	*	.58	.10											.12	.02	.25	.69	.33	.13	.09											2.31
Marshall Pass	Gunnison		T.												T.	T.	T.	.12		.14		.10										0.36
Meeker	White		.39													*	.40	*	1.19													1.98
Montrose (near)	Gunnison														.10	.09	1.30	.10	.09	.19	.05											1.92
Nast	Grand		.13												.03		.24	.60	.30	.10												1.40
Pagoda	Yampa		.33														.30	.72	.20	.05												1.60
Pagosa Springs	San Juan		.28												.03	.03	1.08	.33		.34	.33											2.42
Paonia	Gunnison		.40												.30	.04	.68	.16	.18	T.												1.76
Parshall	Grand																															
Pitkin	Gunnison		.06												.03	.10	.74		.13	T.	T.											1.06
Rangely	White	.14														.07		.39	.63	.16												1.39
Redcliff	Grand		T.		T.													.52	.12	.50		.55										1.69
Rico	Dolores		1.21									.04		.02	.45	.79	1.18	.45		.41												4.55
Rifle	Grand																															
River Portal	Gunnison		.32											.35		.69	.59															1.95
Sapinero (near)	do		.33	.01											.15	.02	.61	.52	.32	.23	.25											2.45
Shoshone	Grand		.47												.11	.01	.14	.19	.12	T	T.											1.04
Silverton	San Juan		.70	.05									T.	T.	.70	.18	1.23	.32	.03	.25	.01											3.47
Silverton (near)	do	.68														.80	.90	2.50														4.88
Spruce Lodge	Grand		.22			.10									.17	.07	.10	.50	.26	.32												1.74
Steamboat Springs	Yampa		.26														.31	.96	.34													1.87
Tacoma	San Juan		.60												.57	.52	1.20	.07		.95	.10											4.01
Terminal Dam	do		.46										.03	.02	.40	.86	.78	.15		.49	.06											3.25
Terrill's Ranch	Grand		.17														.84	.18	.20													1.39
Uncompahgre Plateau	Gunnison																															
Whitepine	do																															
Yampa (near)	Yampa			.08											.07		.43	.37	T.													0.95
Utah.																																
Baker	Colorado																															
Basin	Grand																															
Castle Dale	Green		.10													.45	.30															0.85
Elkhorn	do																															
Emery	Colorado															.45	.50															0.95
Escalante	do													.40		.20	.65		.06													1.31
Fort Duchesne	Green		.47											.07	.03	.27	.07															0.91
Fruitland	do		.30										.09	.05	.04	.40	.30	T.	.04	.62												1.84
Grayson	San Juan																															
Green River	Green		.19												.05				.06													0.30
Hanksville	Colorado																															
Hite	do		.11										T.		T.	.22	.06	.21	.07	T.												0.67
La Sal	Grand		.17												T.	13	.63	.04	.06	T.												1.03
Loa	Colorado																															
Manila	Green		.10										.10	.05	.23			.05	.55	.14												1.22
Moab	Grand		.23													T.	.86	T.	.08													1.17
Monticello	do																															
Orderville	Colorado	.20	.35										.01		T.	.55	.24	T.														1.35
Price	Green																															
Ranch	Colorado	.14	.48										.42		1.29	.52	.17															2.97
St. George	do	.12														.64	.15															0.91
Scofield	Green																															
Springdale	Colorado																															
Sunnyside	Green		.25										.46		.03	.80	.25	.60		T.												2.39
Teasdale	Colorado		.13													.59	.57	.39														1.68
Theodore	Green		.30										.01	.17	T.	.60	.44		T.	T.												1.52
Tropic	Colorado		.52									.07			T.	1.24	.30	.05														2.18
Trout Creek Ranger	Green	.35	.20												.60	.30	.20	.30	.60	.30												2.85
Vernal	do		.65											.12		.22	.11	.05	.13													1.28
New Mexico.																																
Alma	Gila		.09													.29					.17											0.55
Aragon	do		.38																	.65	T.											1.03
Blackrock	Little Colorado										T.					.34	T.			.18												0.52

TABLE 2.—*Daily precipitation for October, 1910. District No. 9*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
New Mexico—Cont'd.																																	
Bloomfield	San Juan	T.	.12									T.	T.		.19	.06	.21	.08	T.	.37	T.												1.03
Cambray	Mimbres																			T.	T.												T.
Columbus	Gila														.03																		0.03
Deming	Mimbres																																0.00
Dulce	San Juan		.22										T.	.28		.01	.60	.08	.01	.34	.70												2.24
Fort Bayard	Mimbres		T.												T.	.15	T.			.28												0.43
Fort Wingate	Little Colorado		.20									.10			.10	.10			.10	.20												0.80
Fruitland	San Juan		.18												.25	.15	.20	.15	.12	.40												1.45
Gage	Mimbres																																0.00
Gila	Gila															.28				.13												0.41
Gila Planting Station	Mimbres		.15													.14	.03			.07	.25												0.64
Hachita	Gila											T.																					T.
Haynes	San Juan											.28					.48	.22	.41	.62	.25												2.26
Hermanas	Gila																																0.00
Lordsburg	...do																																0.00
Luna	...do																																
Mimbres	Mimbres		.03																	.37	.40												0.80
Pratt	Gila																																0.00
Putnam	San Juan																																
Redrock	Gila															.25		.02															0.27
Rodeo	...do																																0.00
Rosa	San Juan																																
Arizona.																																	
Allaires Ranch	Sonora	.06													.05																		0.11
Arizona Canal Dam	Salt	.02										T.																					0.02
Aztec	Gila	.16														.03																	0.19
Benson	San Pedro																																0.00
Bisbee	...do		.24																														0.24
Bonita	Mimbres	.01													.11																		0.12
Bowie	Gila															T.																	T.
Buckeye	...do	.02																								T.							0.02
Camp Verde	Verde																																
Canille	San Pedro	T.	.05												T.											T.	T.	T.					0.05
Casa Grande	Gila																																0.00
Cave Creek	Verde	.04														.15																	0.19
Chin Lee	San Juan	T.	.12									T.				.42	.12	.03	.06														0.75
Chlarsons Mill	Gila	.03														.22																	0.25
Clifton	...do															.23				T.	.03												0.26
Cline	Salt																																
Cochise	Desert	T.													T.																		T.
Columbia	Agua Fria	T.									.02					.25																	0.27
Congress	Hassayampa	.24										T.			.58															T.			0.82
Courtland	White	.03																															0.03
Dos Cabezos	Desert																																0.00
Douglas	Sonora	T.	.18													T.										T.							0.18
Dudleyville	Gila	.01													T.	.02				.02													0.05
Fairbank	San Pedro		.14																														0.14
Flagstaff	Little Colorado	.06										.16	T.		.02	.25	.04		.01														0.54
Florence	Gila	.02													.09																		0.11
Fort Apache	Salt	.01													.01	.02			.02														0.06
Fort Huachuca	San Pedro		.20																									T.					0.20
Fort Mohave	Colorado																																
Gilabend	Gila	.02													.06																		0.08
Globe	Salt	.02											.05			.01				.10													0.18
Grand Canyon	Colorado																																
Greer	Little Colorado	.12	.08																.12	.35													0.67
Hereford	Gila																																
Holbrook	Little Colorado												.04							.05													0.09
Intake	Salt	.01													.06																		0.07
Jerome	Verde												.23	T.		.58																	0.81
Keams Canyon	Little Colorado	.03	T.													.31	.15		.35														0.84
Kingman	Colorado	.19													.08	.23														.15			0.65
Lewis Springs	San Pedro			.02																													0.02
Maricopa	Gila																																
Mesa	Salt	.02													.11																		0.13
Mohawk Summit	Gila	T.																															T.
Naco	San Pedro		.24																														0.24
Natural Bridge	Verde	.17														.25																	0.42
Nogales	Santa Cruz																																
Oracle	San Pedro	.02											.23			.04										T.	T.						0.29
Osborn	...do	.25																															0.25
Paradise	Desert															T.																	T.
Parker	Colorado																																0.00
Payson	Verde	.30										T.	T.		T.	.64			T.														0.94
Phoenix	Salt	.05										T.			.13	T.																	0.18
Pinal Ranch	...do	.04													.09				.09														0.22
Pinto	Little Colorado	T.	T.						T.						T.	.33		.10	T.														0.43
Prescott	Hassayampa	.47										.12			T.	.60																	1.19
Quartzsite	Colorado											.09			.10																		0.19
Redrock	Santa Cruz	.03																								T.							0.03
Roosevelt	Salt	.12											.01	.10	.07																		0.30
Sacaton	Gila	.02													.13																		0.15
St. Johns	Little Colorado															.10				.80													0.90
St. Michaels	...do		.05										T.			.38	T.	T.	.30	.40													1.13
Salome	Colorado	.02										.05				.12																	0.19
San Carlos	Gila	.25	.07										.48		T.					.15													0.95
San Simon	...do																																
Seligman	Verde																																
Sentinel	Gila	T.													T.																		T.
Showlow	Little Colorado																																
Silverbell	Santa Cruz		T.												.07	T.												.01					0.08
Snowflake	Little Colorado	T.															T.		.41	.23	T.												0.64
Supai	Colorado																																
Tempe	Salt	T.														.09																	0.09
Thatcher	Gila	.01													.03																		0.04
Tombstone	San Pedro	.09																															0.09
Truxton	Colorado																																
Tuba	Little Colorado		.02													.05	.07																0.14
Tucson	Santa Cruz	T.	.02									T.			.02	T.																	0.04
Vail	...do		.01												.04																		0.05
Walnut Grove	Hassayampa	.10													.60																		0.70
Wickenburg	...do	.01													.02																		0.03
Willcox	Desert	.12																															0.12
Williams	Colorado	.04										.14				.19																	0.37

TABLE 2.—*Daily precipitation for October, 1910. District No. 9*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Arizona—Cont'd.																																	
Winslow	Little Colorado															T.			.03	T.													0.03
Yarnell	Hassayampa												.50																.20				0.70
Yuma	Colorado	.07													T.																		0.07
Nevada.																																	
Caliente	Colorado														.02	.04	.02																0.08
Las Vegas	....do															.37	.15																0.52
Logan	....do																																

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 9, Colorado Valley.*

Date.	Wyoming.				Colorado.										Utah.						New Mexico.			
	Daniel.		Green River.		Durango.		Grand Junction.		Gunnison.		Meeker.		Steamboat Springs.		Emery.		Fort Duchesne.		Hite.		Moab.		St. George (Experiment station).		Fort Bayard.		Fort Wingate.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	72	21	75	32	78	36	82	49	73	20	77	32	78	22	79	41	78	36	90	56	90	42	90	47	84	52	73	41
2	57	34	68	41	72	39	70	47	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
3	57	17	65	24	63	31	66	40	70	21	59	41	63	19	70	31	69	33	86	45	88	46	88	46	80	46	73	33
4	53	29	59	31	66	37	70	42	70	24	59	41	63	21	68	36	68	36	86	46	88	46	88	46	80	46	73	33
5	51	13	59	24	66	37	68	40	64	21	58	34	60	21	68	36	68	36	86	46	88	46	88	46	80	46	73	33
6	65	17	70	24	72	31	74	41	60	15	72	33	73	14	76	41	78	36	90	56	90	42	90	47	84	52	73	41
7	69	20	79	30	78	33	78	44	70	25	82	25	84	16	78	42	78	36	90	56	90	42	90	47	84	52	73	41
8	74	25	81	32	83	37	81	44	77	25	83	25	83	19	78	42	78	36	90	56	90	42	90	47	84	52	73	41
9	75	20	83	30	83	39	81	38	75	16	83	26	89	18	80	42	80	36	90	56	90	42	90	47	84	52	73	41
10	76	20	86	31	77	40	85	48	78	19	83	29	89	18	80	42	80	36	90	56	90	42	90	47	84	52	73	41
11	73	25	83	32	78	37	82	49	73	20	77	32	78	22	79	41	78	36	90	56	90	42	90	47	84	52	73	41
12	68	23	76	30	78	36	82	49	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
13	68	22	76	30	78	36	82	49	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
14	68	22	76	30	78	36	82	49	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
15	68	22	76	30	78	36	82	49	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
16	58	23	62	28	58	38	58	43	53	29	62	41	62	25	76	41	76	36	90	56	90	42	90	47	84	52	73	41
17	56	22	62	29	58	38	58	43	53	29	62	41	62	25	76	41	76	36	90	56	90	42	90	47	84	52	73	41
18	54	20	60	28	58	38	58	43	53	29	62	41	62	25	76	41	76	36	90	56	90	42	90	47	84	52	73	41
19	48	16	60	25	58	38	58	43	53	29	62	41	62	25	76	41	76	36	90	56	90	42	90	47	84	52	73	41
20	46	16	58	25	58	38	58	43	53	29	62	41	62	25	76	41	76	36	90	56	90	42	90	47	84	52	73	41
21	50	12	55	21	63	36	68	42	73	20	77	32	78	22	80	41	78	36	90	56	90	42	90	47	84	52	73	41
22	54	22	56	25	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
23	58	22	61	25	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
24	56	20	63	23	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
25	60	25	68	32	68	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
26	53	12	59	24	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
27	56	11	58	23	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
28	55	12	58	23	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
29	56	15	61	25	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
30	58	15	60	26	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
31	54	15	60	25	63	37	68	42	74	19	65	35	53	36	72	42	72	39	88	50	91	45	91	47	80	50	71	37
Mns	58.8	19.4	62.8	27.1	63.7	33.7	66.6	39.3	63.3	18.6	62.8	26.9	62.7	19.9	68.0	33.4	65.1	30.4	75.7	45.0	72.3	36.4	79.9	39.7	74.6	43.5	67.4	34.7

Date.	Arizona.																							
	Bisbee.		Flagstaff.		Fort Apache.		Grand Canyon.		Parker.		Phoenix.		Prescott.		St. Michaels.		San Carlos.		Tucson.		Yuma.		Logan, Nev.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	78	61	63	36	84	42			95	55	80	57	80	46	82	40	89	47	85	51	93	67	95	51
2	72	54	65	28	72	38			95	56	82	57	82	46	82	40	91	47	85	51	94	63	96	46
3	76	57	70	34	78	40			102	50	86	57	84	46	84	42	94	47	88	52	96	63	98	46
4	78	54	68	36	82	42			100	52	88	57	86	46	86	42	96	47	90	52	97	65	100	50
5	78	57	69	34	83	42			104	50	94	57	88	46	86	42	96	47	90	52	97	65	100	50
6	77	57	74	33	84	43			106	60	96	57	88	46	86	42	96	47	90	52	97	65	100	50
7	77	57	74	33	84	43			110	60	96	57	88	46	86	42	96	47	90	52	97	65	100	50
8	81	59	78	30	83	46			108	56	96	57	88	46	86	42	96	47	90	52	97	65	100	50
9	79	54	78	32	86	47			110	56	96	57	88	46	86	42	96	47	90	52	97	65	100	50
10	75	54	77	32	84	42			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
11	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
12	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
13	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
14	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
15	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
16	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
17	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
18	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
19	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
20	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
21	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
22	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
23	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
24	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
25	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
26	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
27	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
28	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
29	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
30	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
31	74	56	74	31	84	47			106	55	96	57	88	46	86	42	96	47	90	52	97	65	100	50
Means	72.3	51.0	63.6	30.9	78.1	35.8			94.1	50.9	87.2	57.3	71.3	37.2	68.3	32.2	85.8	45.7	87.8	53.1	93.9	56.3	84.9	46.7

Climatological Data for October, 1910.

DISTRICT No. 10, GREAT BASIN.

ALFRED H. THIESSEN, District Editor.

GENERAL CLIMATOLOGICAL CONDITIONS.

The month of October, 1910, was exceptionally pleasant, most of the days being warm and sunny, and the precipitation, while quite heavy, falling on comparatively few days. The temperature for the district was fairly uniform, and averaged about 1.4° above the normal. The precipitation was unevenly distributed, and for the district averaged 0.21 inch above normal.

TEMPERATURE.

The monthly mean temperatures were high generally, but more especially in the sheltered valleys of the Utah area, in the lake region of Nevada, and in the Oregon area. The means ranged from 65.6°, at Jean, in southern Nevada, to 39.4°, at Geyser, in eastern Nevada. The greatest plus departure occurred at Ely, Nev., whose mean temperature was 49.6°, which is 6.2° above normal; while the greatest minus departure occurred at Corinne, Utah, where the mean temperature was 45.0°, or 6.4° below normal. Only a few places on the shores of Great Salt Lake and in central Nevada reported temperatures below normal.

The highest temperature of the month occurred during the first decade, and almost all stations reported their maximum temperatures as occurring in that period. The highest reported was 95° at Fillmore, Utah, on the 9th, while temperatures of 90° or above occurred at a few other places, and temperatures above 80° occurred at most stations in the district.

The temperature fell generally after the 11th, and continued moderately low for the remainder of the month. The lowest temperatures occurred, as a rule, during the period extending from the 25th to the end of the month, but some stations in Nevada reported their lowest temperatures on the 12th, 13th, and 14th. The lowest temperature for the month was 7° at Cobre, Nev., on the 28th, the next lowest being 8° at Woodruff, Utah, on the 28th and subsequent dates. There were only three stations in the entire district whose minimum temperatures did not fall to freezing during the month, namely, Salt Lake City and International, Utah, and Jean, Nev.

The greatest monthly range of temperature for the district was 87°; the greatest monthly station range was 80° at Carlin, Nev.; and the greatest daily range was 67° at the same place.

PRECIPITATION.

The precipitation for the district as a whole averaged 1.05 inch, which is 0.21 inch above normal. Exceptionally large amounts for the region fell in the Utah area, south-central Nevada, and in parts of the Oregon area. At nearly all stations in the Utah area the monthly amounts were much above normal. Deficient amounts fell in northwestern Utah and northeastern Nevada.

Rain fell over practically the entire district on the 1st, and continued locally until the 4th. Rain again began on the 11th and fell almost continuously at some point in the district until the 19th. Fair weather prevailed for the remainder of the month.

The largest 24-hour amount was 2.00 inches, which fell at Park City, Utah, on the 19th. The largest monthly amount, 4.17 inches, also occurred at that place.

One inch of snow fell at Evanston, Wyo., and at Glenbrook, Nev. Traces of snow were reported at a few other stations.

MISCELLANEOUS PHENOMENA.

Sunshine during the month was below normal, but plentiful. At Salt Lake City, Utah, 68 per cent of the possible amount was recorded.

For the district there was an average of 20 clear, 5 partly cloudy, 6 cloudy, and 4 rainy days.

NOTE.

The Strawberry Valley Project of the Reclamation Service is now 43 per cent completed, 492 linear feet of the tunnel having been excavated during October. The tunnel is 35 per cent done. About 2,000 feet of the bottom and several hundred feet of the sides and arch, all concrete, were placed during the month.

TABLE 1.—*Climatological data for October, 1910. District No. 10, Great Basin.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Wyoming.																				
Border	Uinta	6,085	7	43.5	+ 2.3	84	10†	10	26	59	1.25	+ 0.29	0.45	0.0	5	18	5	8	w.	S. W. Condron.
Cokeville	do	6,204	0	40.4		75	10	10	27	49	1.60		0.47	0.0	6	23	3	5	w.	E. J. Tuckett.
Evanston	do	6,860	13	42.3	+ 0.3	79	8	15	28	53	1.24	+ 0.12	0.52	1.0	5	21	5	5	sw.	Frank Tucker.
Idaho.																				
Geneva	Bear Lake		3								1.05		0.92	0.0	2	29	2	0		F. W. Boehme.
Grace	Bannock	5,400	4	49.4		86	8	18	31	59	0.89		0.60	0.0	4	17	8	6	n.	Cyril B. Dickson.
Oxford	do	4,750																		Edwin Smith.
Paris	Bear Lake	5,946	16	45.6	+ 0.9	83	10	13	27	53	1.03	+ 0.10	0.30	T.	5	17	8	6	w.	John Norton.
Stone	Oneida	4,520																		Thos. W. Roe.
Weston	do	4,460	13	48.0	+ 1.2	86	10	15	27	50	0.61	− 0.65	0.22	0.0	5	21	3	7	sw.	Wm. Chatterton.
Utah.																				
Alpine	Utah	4,900	13																	George Stevens.
Annabella	Sevier	5,250	5																	J. W. Fairbanks.
Beaver	Beaver	6,000	7	50.4		87	9	28	21†	43	2.73		0.94	0.0	5	19	8	4	sw.	James Connell.
Black Rock	Millard	4,872	10	49.6		90	9	20	28†	59	1.60	+ 0.60	0.77	0.0	4	21	3	7		W. D. Livingston.
Blacksmiths Fork	Cache		1																	Forest Supervisor.
Card Canyon	do		1																	Do.
Castle Rock	Summit	6,244	7																	David Moore.
Cedar City	Iron	5,750	5	51.8[k]		83	10	28	19	44[k]	1.49		0.85	0.0	6					Parley Dalley.
Corinne	Boxelder	4,240	40	45.0	− 6.4	84	1†	20	28	46	1.00	− 0.02	0.58	0.0	2	17	6	8		A. C. Murphy.
Deseret	Millard	4,541	16	51.4	+ 2.3	89	10†	20	28†	52	1.30	+ 0.76	0.38	0.0	6	19	7	5	n.	S. W. Western.
Enterprise	Washington	4,270	2																	John Day.
Farmington	Davis	4,267	10	50.0	− 0.1	76	8	20	27	37	1.97	+ 0.63	0.65	0.0	7	21	4	6	nw.	Charles Boylin.
Fillmore	Millard	5,100	20	55.2	+ 2.7	95	9	26	27†	51	1.84	+ 0.87	0.45	0.0	6					J. J. Starley.
Friese Summit	Wasatch																			Victor A. Friese.
Frisco	Beaver	7,318	16	51.0	+ 1.6	82	9	28	28	35	1.90	+ 1.18	0.62	0.0	6					E. R. Smyth.
Garland	Boxelder		1	50.8[i]		87	10	24	21†	52[i]	0.48		0.25	0.0	4	9[i]	9[i]	4[i]	s.	Harry B. Shaw.
Garrison	Millard		7	50.8		89	11	19	28	40	0.50		0.45	0.0	2	18	4	9	s.	E. M. Smith.
Government Creek	Tooele	5,277	10	51.4	+ 2.1	85	10	24	20	34	0.88	+ 0.15	0.32	0.0	5	21	6	4	s.	Walter James.
Grantsville	do		1																	Allen J. Fraser.
Grouse Creek	Boxelder										0.36		0.17	0.0	4	23	7	1	sw.	Philip Paskett.
Heber	Wasatch	5,606	17	46.3	+ 1.2	80	10	14	28	50	1.19	− 0.08	0.45	0.0	7	21	4	6	s.	John Crook.
Henefer	Summit	5,301	11	46.8	+ 1.8	89	10	13	28	62	1.54	+ 0.40	0.60	0.0	7	18	6	7	nw.	Wm. Brewer.
Ibapah (near)	Tooele	7,500	5	47.0[e]		80	9	22	27	42[e]	3.04		1.24	0.0	5	21[b]	5[b]	3[b]	n.	J. S. Lawton.
Ibex	Millard																			John J. Watson.
International	Tooele	5,370	1	53.2		86	10	33	27	30	1.89		0.81	0.0	5	17	10	4	se.	I. S & R. Co.
Iosepa	do					90	10	21	29	42	0.95		0.33	0.0	4	17	5	9	n.	James Mackie.
Kanosh	Millard	5,250	2								1.24		0.38	0.0	7					Geo. Crane.
Kelton	Boxelder	4,230	32	47.9	+ 0.2	78	8†	24	20†	44	0.05	− 0.44	0.05	0.0	1	12	18	1	sw.	F. W. Klock.
Levan	Juab	5,010	20	48.6	+ 1.3	82	10	21	21	41	1.55	+ 0.36	0.60	0.0	5	22	3	6	sw.	Wm. Brown.
Logan	Cache	4,507	19	49.7	+ 2.0	81	9†	26	27	32	1.73	+ 0.47	0.62	0.0	5					Utah Exp. Station.
Lucin	Boxelder	4,504	6	48.6		81	12	19	30†	51	0.20		0.20	0.0	1	18	13	0		C. J. Burke.
Manti	Sanpete	5,575	16	44.8	− 3.5	68	10	23	28	32	1.52	+ 0.68	0.43	0.0	6	19	0	12		J. M. Anderson.
Marion	Summit	6,750	6								1.86		0.40	T.	8	18	1	12	nw.	Jas. Woolstenhulme.
Marysvale	Piute	6,280	11	48.8	+ 1.7	88	11	21	21†	51	1.24	+ 0.29	0.50	0.0	8	17	5	9	n.	John W. Henry.
Meadowville	Rich	6,200	11	44.6	+ 1.6	73	7	18	28	41	1.35	− 0.04	1.10	0.0	2	20	4	7	w.	J. S. Moffat.
Milford	Beaver	4,962	6	52.5		86	8	20	28	52										J. C. Manuel.
Millville	Cache	4,848	15								1.87	+ 0.29	0.71	0.0	6	17	7	7	n.	Fred Yeates.
Minersville	Beaver	5,070	13								1.52	+ 0.73	0.65	0.0	5					Geo. Roberts, sr.
Modena	Iron	5,479	10	49.6	− 0.5	82	9	22	28	45	1.35	+ 0.53	1.04	0.0	5	17	8	6	w.	U. S. Weather Bureau.
Morgan	Morgan	4,280	7																	W. Visick.
Moroni	Sanpete	5,519	2	52.8[d]		86	10	25	29	43[d]	1.94		0.79	0.0	6	21	1	9	sw.	B. F. Eliason.
Mount Nebo	Utah	4,650	9	52.5[c]		86[c]	10	26[c]	29	43[c]	1.40		0.34	0.0	6	21[c]	3[c]	4[c]	n.	D. C. Walkey.
Nephi (near)	Juab	6,059	7								1.37		0.61	0.0	8					S. Boswell.
Oak City	Millard	4,900	6	53.1		92	10	24	28	43	1.77		0.56	0.0	7	17	11	3		Peter Nielson.
Ogden	Weber	4,310	9	52.5		83	10	31	18†	30[b]	1.52		0.61	0.0	5	20[b]	5[b]	4[b]	nw.	Enoch Farr.
Panguitch Lake	Garfield	9,000	1																	Jas. E. Prince.
Park City	Summit	7,800	13	47.0	+ 1.7	80	10	18	20†	53	4.17	+ 2.11	2.00	0.0	8	18	2	11		Irvin Evans.
Parowan	Iron	5,970	19	52.6	+ 3.8	89	1	25	29	50	1.12	+ 0.23	0.36	0.0	4	19	0	12		S. M. Matheson.
Payson	Utah	4,637	7								2.02		0.92	0.0	8	18	3	10	sw.	D. L. Coombs.
Pinto	Washington	5,907	13	44.7[i]	+ 0.0	70	24†	20	13†	48[i]	1.37	− 0.09	0.70	0.0	6	16[b]	0[b]	7[b]	s.	J. H. Harrison.
Promontory	Boxelder	4,913	39								0.40	− 0.17	0.40	0.0	1					F. C. Houghton.
Provo	Utah	4,532	18	53.4	+ 4.2	93	9	25	31	47	1.72	+ 0.76	0.75	0.0	4	18	12	1	n.	James A. Oliver.
Randolph	Rich	6,442	7								0.81		0.40	0.0	4	26	0	5	nw.	William Rex.
Richfield	Sevier	5,350	20	49.9	+ 2.0	89	9	22	28	46[b]	1.17	+ 0.39	0.52	0.0	4	20[a]	0[a]	10[a]		Joseph J. Jensen.
Saltair	Salt Lake	4,220	7	52.4		75	10	31	28	29	2.41		1.18	0.0	9					E. J. Bench.
Salt Lake City	do	4,360	37	54.2	+ 2.0	88	10	35	28	32	2.64	+ 1.24	1.14	0.0	8	19	5	7	se.	U. S. Weather Bureau.
Scipio	Millard	5,260	15	49.2	+ 1.7	88	9	16	28	54	1.48	+ 0.16	0.60	0.0	5	16	6	9	sw.	Thos. Memmott
Sevier Mine	Sevier																			Max Krotki.
Silver City	Juab	6,127									1.64		0.78	0.0	6	17	7	7	sw.	J. L. Stark.
Spanish Fork Canyon	Utah	4,585	1	53.8		83	9†	31	20†	39	1.98		1.15	0.0	5	18	8	5		U. S. Reclamation Service.
Strawberry Valley	do		4	45.8		83	10	18	20	43	2.11		0.48	0.0	8	21	3	7		Do.
Thistle	do	5,075	18	47.0	− 2.3	90	10†	15	28†	64	1.30	+ 0.77	0.70	0.0	4	20	4	7	nw.	J. Thorgeirson.
Tooele	Tooele	4,900	14	48.8	− 1.7	81	10	26	28	38	1.67	+ 0.32	0.60	0.0	6	11	7	13	n.	E. A. Bonelli.
Utah Lake Pumping Sta.	Utah	4,500	5																	W. A. Knight.
Woodruff	Rich	6,500	12	42.1	+ 1.5	81	9	8	28†	59	1.10	+ 0.05	0.85	0.0	2	17	3	11		J. Sidney Pusey.
Oregon.																				
Burns	Harney	4,157	20	49.9	+ 3.8	84	10	15	26	50	1.16	+ 0.59	0.52	0.0	5	23	5	3		J. C. Welcome, jr.
Christmas Lake	Lake	4,320	2																	John C. Green.
Paisley	do	4,560	6	50.8		78	7	30	27	33	0.29		0.25	0.0	2	23	5	3	sw.	E. C. Woodward.
"P" Ranch	Harney	4,300																		J. P. Jefferson.
Silver Lake	Lake	4,700	14																	Wm. Holder.
California.																				
Al Tahoe	Eldorado	6,235																		A. R. Sprague.
Glen Alpine Springs	do	6,850		46.1		72	7†	25	28	42	0.20		0.10	2.0	2	20	0	11	s.	R. W. Porteous.
Tahoe	Placer			46.2		71	8	23	12	34	0.10		0.10	2.0	1	27	2	2	w.	Robert M. Watson.
Truckee	Nevada	5,819	39	48.7	+ 3.6	74	1†	26	18	44	0.00	− 1.03	0.00	0.0	0	31	0	0		Southern Pacific Co.
Nevada.																				
Aurora	Esmeralda																			J. I. Cain.
Austin	Lander	6,594	21																	James L. Pelton.
Battle Mountain	do	4,843	39	53.2	+ 3.6	94	5	20	27	56	0.31	− 0.13	0.20	0.0	3	21	2	8	w.	Southern Pacific Co.
Beowawe	Eureka	4,903	39	49.6	+ 0.7	87	10	20	27	52	0.53	+ 0.10	0.47	0.0	2	26	1	4	nw.	Do.
Carlin	Elko	5,232	39	48.0	+ 3.2	93	9	13	28	67	0.06	− 0.19	0.03	0.0	3	25	0	6		Do.
Carson Dam	Churchill	4,032	3	53.2		85	9	27	13†	44	0.25		0.21	0.0	2	22	5	4	w.	U. S. Reclamation Service.
Cherry Creek	White Pine	6,450	2	49.1		82	9	22	28	44	0.53		0.27	0.0	4	18	10	3	w.	J. H. Leishman.
Clover Valley	Elko	6,000	10																	I. F. Wiseman.
Cobre	do		1					7	28		0.05	− 0.60	0.04	0.0	2	23	4	4		Southern Pacific Co.

TABLE 1.—*Climatological data for October, 1910. District No. 10*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Nevada—Cont'd.																			
Columbia	Esmeralda	5,750	3	53.4	.....	82	7	28	12†	38	1.10	.....	0.78	T.	5	19	6	6	se.	A. Booth.
Dutton	Elko	5,100	2	44.8	.....	84	8†	11	28	63	0.19	.....	0.06	0.0	5	21	4	6	w.	Golconda Cattle Co.
Elko	do	5,342	39	46.1	+ 2.5	82	9	10	18†	62	0.27	− 0.20	0.09	0.0	5	19	7	5	ne.	Southern Pacific Co.
Ely	White Pine	6,421	19	49.6	+ 6.2	81	7†	20	28	49	0.60	− 0.09	0.32	0.0	4	21	3	7	w.	G. C. Hunting.
Eureka	Eureka	6,500	7	50.2	− 0.1	82	7	21	13	41	0.70	+ 0.08	0.22	T.	6	18	4	9	n.	Clay Simms.
Fallon	Churchill	3,965	5	52.2	+ 1.5	88	8†	23	28	49	0.46	+ 0.08	0.20	0.0	4	25	3	3	n.	U. S. Experiment Farm.
Fernley	Lion	4,200	2	55.6	+ 5.4	89	8	26	28	45	0.39	+ 0.15	0.18	0.0	3	15	11	5	w.	Mrs. A. J. Rankin.
Gardnerville	Douglas	4,830	10	53.0	+ 1.8	81	6	28	20†	46	T.	− 0.57	T.	0.0	0	15	10	6	e.	Wm. Dangberg.
Geyser	Lincoln	.....	6	39.4‖	.....	70	26†	13	29	57	0.14	.....	0.14	0.0	1	.....	.....	.....	.....	Mrs. J. F. Wambolt.
Glenbrook	Douglas	.....	1	48.8	.....	70	5	29	14†	36	0.10	.....	0.10	1.0	1	18	8	5	sw.	C. C. Henningsen.
Golconda	Humboldt	4,697	31	50.0	+ 0.6	84	11	24	27	51	0.50	+ 0.14	0.50	0.0	2	27	0	4	sw.	Southern Pacific Co.
Halleck	Elko	5,631	17	45.8	+ 2.6	86	1	18	20	59	0.49	+ 0.02	0.15	0.0	4	25	3	3	.....	Do.
Jean	Clark	2,074	2	65.6*	.....	84	25	40	12†	29	0.60	.....	0.40	0.0	2	28	0	3	sw.	Salt Lake Route.
Leetville	Churchill	4,020	3	54.4	.....	87	8†	24	13	46	0.30	.....	0.20	0.0	2	.....	.....	.....	n.	U. S. Reclamation Service.
Lewers Ranch	Washoe	5,500	22	52.7	+ 1.5	82	7†	28	12	43	0.80	− 0.77	.....	0.0	3	14	11	6	.....	Ross Lewers.
Lovelock	Humboldt	3,977	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. S. Case.
McAfees Ranch	Esmeralda	4,835	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. H. Rodenkirch.
Millett	Nye	.....	2	49.2	.....	83	7†	18	29	53	0.45	.....	0.25	0.0	2	20	3	8	s.	Fred J. Jones.
Mina	Esmeralda	4,600	3	54.4	.....	84	1†	28	14†	42	0.00	.....	0.00	0.0	0	17	3	11	s.	Southern Pacific Co.
Palmetto	do	6,780	20	51.0	+ 3.1	80	7	29	13	42	1.19	+ 0.53	0.60	T.	5	22	3	6	nw.	A. J. Akin.
Potts	Nye	6,990	17	44.0	− 0.6	75	9	15	28	45	0.30	0.00	0.20	0.0	2	15	6	10	s.	Miss Mamie Potts.
Quinn River Ranch	Humboldt	4,850	8	49.7*	.....	86	10	16	29	57	0.39	.....	0.20	0.0	2	25	1	5	w.	F. M. Payne.
Reno	Washoe	4,532	39	53.2	+ 3.5	84	8	29	14	44	0.71	+ 0.30	0.48	T.	3	20	6	5	w.	U. S. Weather Bureau.
Soda Lake	Churchill	4,534	3	53.6	.....	85	8†	25	13	42	0.21	.....	0.17	0.0	2	22	6	3	s.	U. S. Reclamation Service.
Tecoma	Elko	4,812	32	45.3	− 0.5	82	7	10	27	56	0.10	− 0.31	0.10	0.0	1	13	12	6	s.	Southern Pacific Co.
Tonopah	Nye	6,090	3	53.8	.....	79	9	32	13	27	0.35	.....	0.17	T.	5	17	9	5	se.	U. S. Weather Bureau.
Wabuska	Lyon	4,347	7	52.4	.....	88	20	20	12†	60	0.00	.....	0.00	0.0	0	.....	.....	.....	sw.	Vic Bernard.
Wells	Elko	5,631	38	45.4	− 0.4	76	1	18	21†	54	0.10	− 0.53	0.05	0.0	3	22	0	9	s.	Southern Pacific Co.
Winnemucca	Humboldt	4,432	31	50.2	+ 1.6	85	10	24	29	48	0.96	+ 0.44	0.47	0.0	5	22	4	5	ne.	U. S. Weather Bureau.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
Estimated by observer.
Precipitation for the 24 hours ending on the morning when it is measured
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 10, Great Basin.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Wyoming.																																	
Border	Bear	T.	.40		.23								.45			.02			.10													1.25
Cokeville	do		.37		.21								.47	.21		T.	.10	T.	T.	.24												1.60
Evanston	do		.20		.10								.52			.06			.36													1.24
Idaho.																																	
Geneva	Bear												.92				.13															1.05
Grace	do				.15								.06				.60	.08	T.													0.89
Oxford	do																																
Paris	do		.20		.30									.25			.09	.19														1.03
Stone	Deep Creek																																
Weston	Bear		.22		.04								.15					.11	.09													0.61
Utah.																																	
Alpine	Great Salt Lake																																
Annabella	Sevier Lake																																
Beaver	do	T.	.85										T.		T.	.94	.24	.56	.14													2.73
Black Rock	do		.18												T.	.77	.30	.35														1.60
Blacksmiths Fork	Great Salt Lake																																
Card Canyon	do																																
Castle Rock	do																																
Cedar City	Desert	.26													.04	.85	.19	.05	.10													1.49
Corinne	Great Salt Lake											.42						.58														1.00
Deseret	Sevier Lake	.30													.12	.28	.17	.38	.05													1.30
Enterprise	Desert																																
Farmington	Great Salt Lake	.65	.20		.15								.32			.05		.15	.45													1.97
Fillmore	Sevier Lake		.28											.07	T.	.45	.19	.41	.44													1.84
Friese Summit	Great Salt Lake																																
Frisco	Desert		.43												.12	.32	.30	.28	.15													1.90
Garland	Great Salt Lake		.03										.13					.07	.25													0.48
Garrison	Desert											T.			T.	.45		.05	T.													0.50
Government Creek	do		.10										T.		T.	.20	.06	.32	.20													0.88
Grantsville	Great Salt Lake																																
Grouse Creek	Desert	.01			T.											.17	.13	.05														0.36
Heber	Great Salt Lake	.45										.10	.02		.05	.17	.10	.30														1.19
Henefer	do		.60		.15								.40			.03	.05	T.	.26	.05												1.54
Ibapah	Desert	T.	.27													1.00	1.24	.38		.15												3.04
Ibex	do																																
International	Great Salt Lake	.81			.15								.20			.28		.45														1.89
Iosepa	Desert		.33													.30		.06	.26													0.95
Kanosh	Sevier Lake	.20														.30	.17		.38	.13	.06											1.24
Kelton	Great Salt Lake	T.															.05	T.														0.05
Levan	Sevier Lake		.50										T.			.32	.18	.22	.23													1.55
Logan	Great Salt Lake		.53		.29							.19				T.	.10	.62														1.73
Lucin	Desert															.20	T.															0.20
Manti	Sevier Lake		.43										.02			.30	.34	.36	.07													1.52
Marion	Great Salt Lake	T.	.49		.03								.32	.01	T.	T.	.46	.09	.42	.04												1.86
Marysvale	Sevier Lake		.04											.03	.05	.50	.18	.35	.08	.01												1.24
Meadowville	Great Salt Lake				T.								1.10			T.			.25													1.35
Milford	Sevier Lake																																
Millville	Great Salt Lake		.46		.29								.21	.02		T.		.18	.71													1.87
Minersville	Sevier Lake		.23												.17	.65	.26	.19	T.													1.52
Modena	Desert	.07	.05												.05	1.04	.14		T.													1.35
Morgan	Great Salt Lake																																
Moroni	Sevier Lake		.79										T.		.02	.18	.37	.40	.18													1.94
Mt. Nebo	Great Salt Lake		.30										.34			.20	.25	.11	.20													1.40
Nephi (near)	do		.05		.34									.25	.10	.32	.29		.41	.61												2.37
Oak City	Sevier Lake		.52										.09			.38	.10	.56	.11	.01												1.77
Ogden	Great Salt Lake		.61										.23			T.	.11	.14	.43													1.52
Panguitch Lake	Sevier Lake																																
Park City	Great Salt Lake		.69		.06										.21	.30	.10	.42	.39	2.00												4.17
Parowan	Desert		.36												.30	.36	.10															1.12
Payson	Great Salt Lake	.92											.09		.03	.51	.03	.13	.25	.06												2.02
Pinto	Desert	.17													.06	.70	.26		.16											.02		1.37
Promontory	Great Salt Lake																	.40														0.40
Provo	do		.75									.02		T.				.55	.40													1.72
Randolph	do		.18										.40	.17		.06																0.81
Richfield	Sevier Lake	.22													T.	.14	.52		.29													1.17
Saltair	Great Salt Lake		.45		.10								.13	.01		.05	.20	1.18	.27	.02												2.41
Salt Lake City	do	.84	.50		.04								33			08	.34	.59	.12													2.64
Scipio	Desert		.36												T.	.36	.12	.60	.04													1.48
Sevier Mine	Sevier Lake																																
Silver City	Desert		.78										.17			.29	.13	.06	.21													1.64
Spanish Fork Canyon	Great Salt Lake	*	1.15										.02			.48	.02	T.	.31													1.98
Strawberry Valley	do		.47										.13		.05	.48	.32	.16	.37	.03												2.11
Thistle	do		.70		T.								.10		T.	.40	T.			.10												1.30
Tooele	do	T.	.60		.04								.13			T.	.17	.22	.51													1.67
Utah Lake Pump'g Sta.	do																																
Woodruff	do												.85			.25																1.10
Oregon.																																	
Ana River	Southeast Drainage	.02			.63							.04																					0.69
Burns	do	.11			.38							.52	.05				.10																1.16
Burns Mill	do	.04	.18										.57						.28														1.07
Christmas Lake	do																																
Diamond "H" Ranch	do																																
Paisley	do	.04			.25							T.																					0.29
Plush	do																																
"P." Ranch	do																																
Silver Lake	do																																
Valley Falls	do	T.			.17							T.	T.				.03																0.20
California.																																	
Al Tahoe	Truckee																																
Bijou	do											.12																					0.12
Boca	do									T.																							T.
Bodie	East Walker												.02																				0.02
Bridgeport	do																																
Brockway	Truckee																																
Deer Park	do											.13	.15	.17																			0.45
Donner Ice Camp	do				T.						*	*	.24																				0.24
Fales' Hot Springs	West Walker																																
Glen Alpine Springs	Truckee											.10	.10																				0.20
Hobart Mills	do				T.						*	.17	.06																				0.23
Lundy	East Walker											.10		.25																			0.35
Markleeville	East Carson							.10	.17																								0.27
McKinney	Truckee																																
Shields' Ranch	West Walker											T.		T.																			T.
Silver Creek	East Carson							.12	.16																								0.28

TABLE 2.—*Daily precipitation for October, 1910. District No. 10*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Tahoe	Truckee													.10																			0.10
Tallac	...do																																
Truckee	...do																																0.00
Woodfords	West Carson													.10																			0.10
Nevada.																																	
Aurora	East Walker																																
Austin	Reese																																
Battle Mountain	Humboldt											.05					.06	.20															0.31
Beowawe	...do			.06													.47															0.53
Carlin	...do											.01				.02	.03															0.06
Carson Dam	Carson											T.	.04			.21																0.25
Cherry Creek	Humboldt		.15									T.		T.		.27	.07	.04														0.53
Clover Valley	...do																																
Cobre	...do			.01													.04															0.05
Columbia	Desert	.01										.23		.07		.78	.01															1.10
Dutton	Humboldt		.06	T.								.04				.04	.04	.01														0.19
Elko	...do				.06							.02				.06	.04	.09														0.27
Ely	...do		.32											T.		.25	.09	.03														0.69
Eureka	...do	.03										.12	.05			.22	.12	.16														0.70
Fallon	Carson											.20	.06			.13	.07		T.													0.46
Fernley	Truckee											.13	.08			.18																0.39
Gardnerville	Carson											T.				T.																T.
Geyser	Humboldt															.14																0.14
Glenbrook	Truckee													.10																		0.10
Golconda	Humboldt															*	.50	T.														0.50
Halleck	...do			.10												.09	.15	.15														0.49
Jean	Desert															.20	.40															0.60
Leetville	Carson											.10				.20																0.30
Lewers Ranch	Truckee											*	*	.80																		0.80
Lovelock	Humboldt																																
McAfee's Ranch	Desert																																
Millett	Reese											.20	T.			.25																0.45
Mina	Desert																																0.00
North Fork	Humboldt					.30						.10				*	.40		.05													0.85
Palmetto	Desert											.60		.05	.08	.41														.05		1.19
Paradise Valley	Little Humboldt																																
Potts	Reese											T.	T.			.20	.10															0.30
Quinn River Ranch	Humboldt	T.										.20					T.	.19														0.39
Reno	Truckee										T.	.48	.09	T.		.14																0.71
Rose Creek	Humboldt											.49	.10	.06				.38		.06												1.09
Smith	West Walker																																
Spooners Ranch	Truckee										*	.10																				0.10
Soda Lake	Carson											.04	T.			.17	T.															0.21
Sweetwater	East Walker											.15		.05																		0.20
Tecoma	Humboldt	T.		T.												T.	.10															0.10
Tonopah	Desert											.16		.01	.01	.16	T.													.01		0.35
Wabuska	Walker																																0.
Wells	Humboldt		*	.05												.05																0.10
Willow Point	Little Humboldt				.04												*	.15														0.19
Winnemucca	Humboldt	T.		.09								.28	.08			.05	.42	.04														0.96

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 10, Great Basin.*

| Date. | Wyoming. | | | | Utah. | | | |

Climatological Data for October, 1910.

DISTRICT No. 11. CALIFORNIA.

Prof. ALEXANDER G. McADIE, District Editor.

GENERAL SUMMARY.

October in California may be said to mark the beginning of the rainy season. The long dry period from about the middle of spring to the end of September gives way to conditions in which an occasional storm may appear covering a period of four or five days. Naturally the likelihood of such rains increases as the month draws to a close. There have been Octobers, however, that were as dry as any midsummer month. In a record covering a period of 62 years it appears that for the central counties of California there have been nine Octobers that were practically rainless, or nearly 15 per cent. On the other hand, there have been ten Octobers which might very well be classified as winter months, if we consider the frequency and intensity of the rainfall. The present October was one of deficient rainfall in the central and northern counties of the district; but of heavy rainfall south of the Tehachapi, with the amount increasing as one went southward. All things considered October, 1910, was warmer than usual. It was warmer than last October and still warmer than October, 1908.

There were no noteworthy features, the month as a whole being one of quiet fall weather. In the main the pressure distribution was that of a moderate high over the northern half of the Pacific slope and a moderate low over the Valley of the Colorado, thus causing a general flow of air from the north or northeast. When this distribution is unduly strengthened, we have, in addition to the north winds, marked heating effects in the Great Valley. An illustration of this can be found near the end of the first week of the present October, when afternoon temperatures occurred as follows: Fresno, 96°; Sacramento, 92°; San Jose, 92°; San Francisco, 89°, and Los Angeles, 88°. The first noticeable departure from the general pressure distributuion as referred to above occurred about the 10th of the month. In this case a small depression developing over the northern part of the State practically reversed the circulation of the lower air. The change to southerly winds resulted in lower temperatures and moderate rains. There was an interesting fall in temperature amounting to 23° in 24 hours at Mount Tamalpais on the afternoon of the 10th. The normal circulation was restored about the 13th, except in the southern counties, where this was somewhat delayed. A second warm spell occurred on the 19th under conditions similar to those described in the case of the first warm spell. Afternoon temperatures were as follows: Sacramento, 84°; Red Bluff, 82°; San Francisco, 83°; San Luis Obispo, 83, and Fresno, 84°. The pressure distribution continued practically unchanged until the end of the month.

The weather was favorable from an agricultural standpoint, with the exception of the rains on the 11th, 12th, and 13th. These interferred somewhat with fruit drying, raisin making, and the thrashing of beans. However, ample warnings were given in the forecasts and moreover the great bulk of the crops was already harvested. There was not a sufficient supply of water, although the comparatively early rains relieved the situation somewhat. The first snow fell at Summit on October 11, amounting to 2.2 inches. It melted rapidly, however, and at the close of the month there was no snow on the ground. The greatest rainfall at any one station was at Monumental, where nearly 3.5 inches fell. There were many stations at which no rain was reported.

TEMPERATURE.

The mean temperature for the State was nearly 2° above the normal. The following table gives the mean temperature for California during the time in which records have been kept:

Year.	Mean.	Departure.	Year.	Mean.	Departure.
	°F.	°F.		°F.	°F.
1897	58.5	−1.5	1904	61.6	+1.6
1898	61.0	+1.0	1905	60.7	+0.7
1899	58.1	−1.9	1906	63.4	+3.4
1900	58.8	−1.2	1907	62.0	+2.0
1901	63.2	+3.2	1908	58.3	−1.7
1902	60.7	+0.7	1909	60.2	+0.2
1903	64.0	+4.0	1910	61.9	+1.9

The highest temperature reported at any station was 108° at Indio and Mammoth on the 8th. This was 4° higher than the highest reported during October, 1909. The lowest was 15° at Montague on the 28th. This was 4° warmer than the lowest recorded for October, 1909.

PRECIPITATION.

The average monthly precipitation for the State was 0.83 of an inch, or 0.78 of an inch below the normal. In other words, considering the section as a whole, there was only about half the normal rainfall. Nor was the distribution of the rain geographically of a uniform character. In the southern counties the rainfall was from 10 to 20 per cent above the normal; while in the northern counties, especially the coast counties, there was a deficiency of more than 50 per cent. There appears to have been some persistent cause for the diminished rainfall in the northern counties, during the spring, summer, and early fall of this season there having been a marked deficiency in rain in that section where usually frequent, though often light showers occur.

The average monthly precipitation for California in October is as follows:

Year.	Amount.	Departure.	Year.	Amount.	Departure.
	Inch.	Inch.		Inch.	Inch.
1897	1.79	+0.18	1904	2.74	+1.13
1898	0.59	−1.02	1905	0.12	−1.49
1899	3.50	+1.89	1906	0.09	−1.52
1900	2.34	+0.73	1907	1.56	−0.05
1901	1.50	−0.11	1908	1.37	−0.24
1902	1.78	+0.17	1909	1.66	+0.05
1903	0.49	−1.12	1910	0.83	−0.78

The greatest snowfall was 13 inches at Tamarack, in Alpine County. Total snowfall at Summit was 3 inches. At other places in the mountains the snowfall varied from 1 to 7 inches. In the Yosemite Valley there was half an inch of snow.

SUNSHINE.

The following table gives the total hours of sunshine and percentages of the possible:

Stations.	Hours.	Per cent of possible.	Stations.	Hours.	Per cent of possible.
Eureka	148	43	Sacramento	285	82
Fresno	300	86	San Diego	268	76
Los Angeles	295	84	San Francisco	248	71
Mount Tamalpais	250	72	San Jose	254	73
Red Bluff	279	81	San Luis Obispo	243	69

EARTHQUAKES RECORDED AT SANTA CLARA, CAL., DURING OCTOBER, 1910.

October 4, 3:11:51 p. m. to 3:26:18 p. m.; minor tremors all day; disturbance southeast; period 1.2 seconds; the vertical showed a disturbance on October 3, p. m., but nothing on horzontal; also slight disturbance 11:48 p. m. to 11:50:45 p. m.

October 15, 6:03 a. m. to 12:49:20 p. m.; minor tremors varying to 3 mm. all day; disturbance southeast.

October 17, 9:19:21 p. m. to 9:20:48 p. m.; also October 18, 5:08 a. m. small tremors on horizontal, lasting until 7 p. m.; largest maximum double amplitude 2 mm. direction southeast.

October 21, 10:57:11 p. m. to 11:02:30 p. m.

The disturbance of October 21 is the sixteenth seismic record obtained by Father Ricard and his assistant Mr. A. Newlin at Santa Clara, since the installation of the Weichert 80 kg. astatic horizontal and vertical seismograph. The first record was obtained June 9, 1910.

NOTES ON THE RIVERS OF THE SACRAMENTO AND SAN JOAQUIN WATERSHEDS FOR OCTOBER, 1910.

By N. R. TAYLOR, Local Forecaster.

Sacramento watershed.—No important changes occurred in any of the streams of this watershed after September 30, and, in most cases, the low-water mark was reached in all of the main water courses during the last decade of September or the 1st of October.

The Sacramento River itself, while unprecedentedly low for the month, averaged slightly higher than during the month preceding, due to the rains that were more or less general throughout its drainage area from the 10th to 13th, inclusive. In the vicinity of the month of the Pitt River the Sacramento averaged 0.8 foot higher than during September. At Red Bluff the average stage, 1.1 foot, was 0.1 foot above that of September and the same amount higher than that of October, 1908, the year of extreme low water. At Colusa the river averaged 1.4 foot, which is 1.2 foot below the October normal stage and 0.7 foot below the lowest previous average for the month. At Knights Landing there was an average stage of only 0.3 foot, which is 0.9 foot below the October normal and 0.7 foot lower than the previous lowest average for the month. At Sacramento City the river averaged 5.7 feet, which is 1.5 foot below the average that has been maintained at this point during the past ten years, and 0.2 foot below the low water of October, 1908. Below Sacramento City there was little departure from the usual October stages.

The rainfall had little effect on the general averages of the streams in the Yuba-Feather territory, the Yuba at Marysville being lower than ever before recorded during any month, and the Feather at Oroville being the same as that recorded during the two preceding months.

The stage of the American River at Folsom, Fair Oaks, and Sacramento City averaged practically the same as that recorded in September and slightly higher than that of August, 1910. It was, however, lower than the lowest ever before known in October.

San Joaquin watershed.—While more rain fell in this watershed than in that of the Sacramento, the effects of the rainfall on the streams were less noticeable. The San Joaquin itself averaged generally lower than during the two preceding months, and while some of its tributaries, notably, that of the Tuolumne, responded slightly to the rainfall, all streams by the close of the month had receded to the extreme low-water mark.

The following paper appeared in the Pacific Rural Press, San Francisco, October 29, 1910, and is republished by the courtesy of the Editor:

SIXTY YEARS OF RAINFALL IN CALIFORNIA.

By A. G. MCADIE.

In no portion of the habitable globe are seasonal rainfalls more closely watched and studied than in California. There are many sections of the United States where departures from normal conditions are followed with interest; but there is no district where an excess or deficiency in rainfall means more or is more directly and vitally connected with the welfare of the community than in our own California. The history of each year's rainfall is written in the crop yield and in our material prosperity. If rain falls in sufficient amount within seasonal limits and is well distributed as to time and amount, a good year based upon abundant crop yield may be anticipated. On the other hand, scanty rainfall, or even an average rainfall badly distributed means poor harvests and their consequences. As agriculture underlies commercial prosperity, it is plain that the activities and industries of the State are bound up with and directly dependent upon the seasonal rainfall and the resulting supply of water.

Not without reason then do our people in California at the beginning of each rainy season take an interest in the frequency and intensity of the rains and try to estimate the character of the impending season.

The accompanying diagrams of seasonal rainfall first came into prominence during a period of drought, the dry seasons of 1897–98, and 1898–99, when there was a widespread uneasiness among our people and a general misapprehension that the climate was permanently changing. The charts conclusively show that such dry periods were only incidental and gave no true indication of a permanent change. Indeed, it was made plain that there was every reason for expecting a return to normal conditions.

It is not possible to forecast with any degree of certainty the coming season; but the careful student can detect in these records certain seasonal trends. He can also more intelligently refute the hasty conclusions put forth now and again by eager but poorly informed persons who think they have found the secret of seasonal forecasting.

It is plain that there is no regular sequence of wet and dry seasons, and this is as it should be, because while law is supreme in meteorology as elsewhere and our storms develop, move, and disappear in accordance with physical laws, understood in part, there are too many independent variables entering into the problem of rain formation and the condensation of the water vapor of the air to allow us to hope for a regular and easy solution of the problem. It is plain from the charts that an abnormal wet month is not necessarily followed by another of the same character; or in other words, rainy periods are of unequal length. No one can predict from the existence of one dry month in winter that the balance of the season will be dry. All that we can say at present is that wet seasons and dry seasons come and go in a very irregular way. Nor is there any determinable period between abnormal conditions. The chart herewith covers the rainfall for sixty years at two stations, San Francisco and San Diego, more than 500 miles apart. If we divide the sixty years in decades, we have:

SAN FRANCISCO.

	Inches.
10 seasons, 1849–1859	227.47
10 seasons, 1859–1869	257.85
10 seasons, 1869–1879	227.00
10 seasons, 1879–1889	234.23
10 seasons, 1889–1899	218.81
10 seasons, 1899–1909	210.28

The mean rainfall for ten seasons is 229 inches.

It is interesting to note that during the month of January, 1862, 24.36 inches fell, i. e., more rain fell in one month than the normal annual rainfall.

SAN DIEGO.

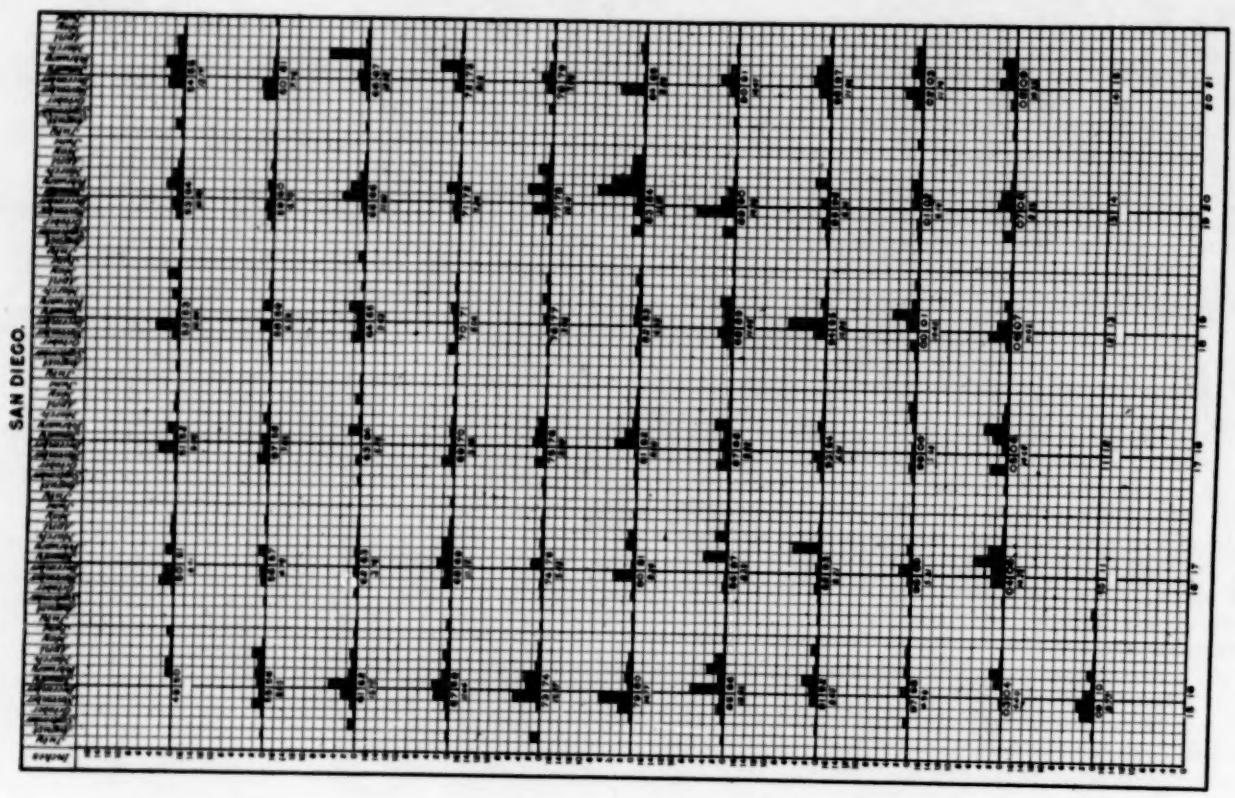
	Inches.
9½ seasons, 1850–1859	81.05
10 seasons, 1859–1869	97.04
10 seasons, 1869–1879	84.71
10 seasons, 1879–1889	119.21
10 seasons, 1889–1899	88.54
10 seasons, 1899–1909	97.24

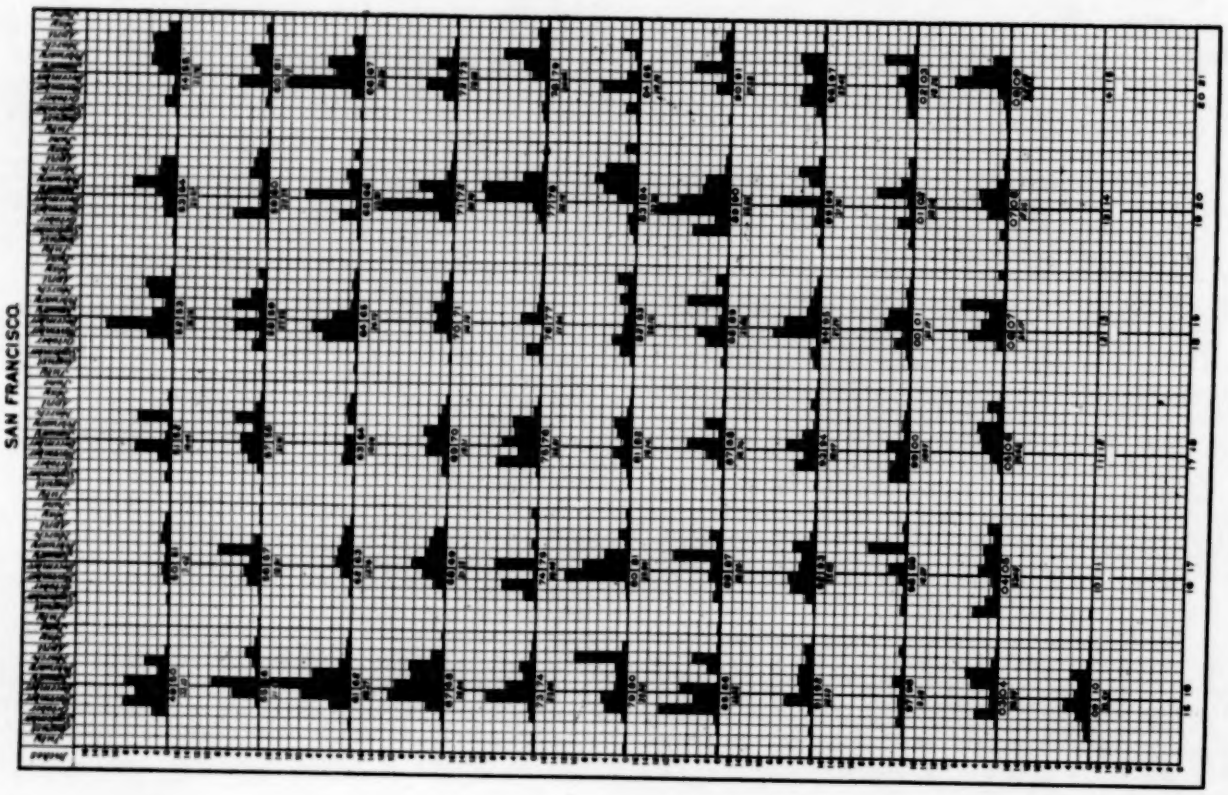
Allowing for the missing half season, we make the average rainfall for each ten seasons 95 inches.

Note that in February, 1884, there was a rainfall of 9.05 inches; or almost as much as the normal rainfall of an entire season.

One will often hear it stated, especially in southern California, that a dry October presages a dry winter, but the records show that little dependence can be placed in statements of this character. One of the heaviest seasonal rainfalls, that of 1873–74, followed a dry October. A wet fall is, however, frequently followed by a wet winter.

Let it be also remembered that the State of California extends from latitude 32° 40′ to 42° 0′ N. It has a mean length of nearly 800 miles, with an average width of 200 miles and an estimated area of a hundred million acres. Naturally in so large an area there must be great diversity in the character of the rain. At some localities in the State the seasonal rainfall does not average one inch. While at others it exceeds 80 inches. In general, seasons of heavy rainfall in the north are also seasons of good rainfall in the south. But exceptions can be found even to this. There is one type of storm, the Sonora, which, causing heavy rains in the south, leaves the northern counties practically without rain. On the other hand, many of the northern storms pass eastward without resulting rains in the southern counties.


SAN DIEGO.


SAN FRANCISCO.

FORECASTS FOR RAISIN MAKERS.

By Mr W. E. BONNETT, Local Forecaster, Fresno, Cal.

There are now many specialized industries, agricultural and commercial, that are vitally concerned with the various warnings issued by the Weather Bureau, and among these is the raisin making industry. It is distinctively a California industry and is still further restricted geographically as it is confined largely to the interior valleys of that State. Raisins are grown in all counties of the San Joaquin Valley, but Fresno County with the city of Fresno near the center of the raisin producing district, produces the greatest tonnage of this fruit, the total production for the State having reached the considerable figure of approximately 100,000,000 pounds. However, no more than two-fifths of all the grapes grown in the State are made into raisins, the remainder being used in making wines or for shipment as fresh table fruit.

In its relation to the Weather Bureau, this industry possesses some features that distinguish it from all of the others that have come to rely on the regular and special forecasts of this service so that timely provision may be made to prevent damage from unfavorable weather conditions. While there are conditions of weather that may unfavorably affect the grapes during the growing stages thay are not of the kind against which protective measures can be taken and any consequent loss is probably not a preventable one. For example, a period of unusual heat when the grapes are just "setting" is often the cause of much dropping so that the clusters are not well filled and this injury is sometimes increased when high winds accompany the high temperature.

It is during the curing or drying season, then, that valuable service is rendered the grower by the Bureau in giving him warning of coming rain so that his raisins may be properly protected. The work of picking the grapes is begun about August 20 and is usually completed during the first week of September, if the crop has ripened with general evenness and ample labor for the business of picking has been available. As the grapes are picked they are spread on small trays, 2 by 3 feet in size. The bottoms of these trays are made of material one-quarter of an inch in thickness and the pieces forming the bottom are held together by nailing battens across each end. For the average yield, about 300 trays per acre are needed. The picking is done at a stipulated price per tray, 22 pounds of grapes being placed on each one. As the trays are filled they are set on the ground, side by side, between the rows of vines. Alternate rows afford sufficient room for the average crop when the trays are laid close together, and the trays are then in position for the most expeditious handling when stacking may be necessary.

Under normal drying conditions in the early part of the curing season about three weeks is required for proper curing. Later in the season with lower temperatures, increased relative humidity, and occasional rains the season may be greatly prolonged and it is usual that from one cause or another a considerable proportion of the crop must be carried through the perils of a rather late curing season. Many of those who are engaged in the production of raisin grapes are engaged in that alone to the exclusion of every other horticultural or agricultural interest and the fruit of a whole year's labor is spread upon the ground at one time during the drying season. Naturally, the keenest anxiety prevails among the growers at this time lest a rain should come and damage or, it may be, completely ruin the crop. If the raisins become wet a damage ranging from 10 or 20 per cent to total loss occurs. The damage is greater when the wetting occurs in the more advanced stages of the curing and it is also greater, of course, the more prolonged is the period of rainfall. Even those raisins that have been protected from the rain are not altogether immune from damage, if wet, cloudy weather continues for four or five days, in which case the partly cured fruit may mold in the stack.

How favorable to this business of raisin making the weather is under normal conditions may readily be seen when it is pointed out that August at Fresno has 96 per cent of sunshine and September 89 per cent and that normally no rain occurs until about September 20. But occasional rains do occur and the forecaster is called upon for the utmost vigilance so that they do not come unheralded. Following a summer in which cloudless day has succeeded cloudless day, the appearance of even a few clouds is occasion enough for general alarm among the growers and those who have not already received the forecast hasten to the telephone to get it. For be it known that each grower is himself an alert observer and no change in local appearances goes unheeded. Owing to a particularly unfavorable schedule for the dispatch of mails from the local post-office the dissemination of forecasts by mail is not so complete as might be wished and the telephone is the most effective means at present in use here for the distribution of regular forecasts and special warnings. However, with increasing cloudiness and increasing anxiety on the part of the growers this means proves inadequate when limited to one office telephone and in order to get warnings to those on our special telephone list it has been necessary to call them from the residence telephone while the office telephone is being answered as rapidly as the switching can be done.

The grower having received the warning, all available help is hurried into the vineyard and the work of stacking the trays is rushed with all possible speed. How every hand, including even school children and those whose usual occupations do not take them near the vineyards, is pressed into service in these emergencies has been mentioned by Professor McAdie and others, as also, that as much as 75 cents per hour is demanded and received for this work. It must be remembered that the number of trays spread upon the ground in the midst of the drying season is very great indeed, the vineyard ranging in size from a few acres to four and five thousand acres, at most of which temporary assistance is required when stacking the raisins and which bid for the help to be had. These virtual calls to arms have been made in the streets of Fresno during the present season.

About 20 trays are placed in one stack and an empty tray is laid on top to turn off the water while other empty trays are hung at each side of the stack to prevent the rain from being blown in. That no very great wind velocities accompany these early rains is a fortunate meteorological circumstance else these none too stable stacks of trays would be blown over. There being very little danger on this account, the stacking may proceed without loss of time in chosing a site for the stack or in providing any other protection than that afforded by the trays themselves.

Precautionary measures against damage by stress of weather always involve necessary expense, whether they are taken to avoid damage by frost, flood, storm, or rain and the expenses of stacking raisins and spreading them again when the danger from rain is past adds a considerable item to the cost of their production. Owing to the fact that damage more or less severe positively results if the raisins become wet the growers are not inclined to take any chances, whatever, and unguided by the forecasts much more stacking would be done. Thus the Bureau has saved much to the growers by its timely warnings of rain and it has also effected a great saving for them in avoiding needless stacking.

TABLE 1.—*Climatological data for October, 1910. District No. 11, California.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Oregon.																				
Klamath Agency	Klamath	4,169	2	45.2	.....	76	8	19	31	53	1.17	.....	1.10	0.0	2	22	3	6	w.	Edson C. Watson.
Klamath Falls	do	4,250	15	49.3	+ 0.1	81	8	25	2	44	1.62	+ 0.56	1.25	0.0	5	24	3	4	nw.	W. H. Heilman.
Lakeview	Lake	4,800	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. L. Wharton, jr.
Merrill	Klamath	4,070	4	48.5	.....	80	7	21	2	50	0.91	.....	0.91	0.0	1	24	4	3	.....	Mrs. Agnes Ritchson.
Yonna	do	.....	3	45.8	.....	80	8	16	28	52	1.38	.....	0.73	0.0	5	22	7	2	s.	Jacob Rueck.
California.																				
Alameda	Alameda	.....	1	61.3	.....	84	7	48	5	....	T.	.....	T.	0.0	0	21	4	6	nw.	Chas. E. Sears.
Alturas	Modoc	4,460	6	49.4	.....	84	8	22	23†	54	1.01	.....	0.46	0.0	6	23	3	5	sw.	Prof. C. B. Towle.
Anderson (near)	Shasta	550	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. S. Richardson.
Angiola	Tulare	208	10	54.2	−10.2	80	19	35	23†	42	0.57	+ 0.43	0.30	0.0	2	27	0	4	nw.	Santa Fe Co.
Antioch	Contra Costa	46	31	.....	.....	.....	.....	.....	.....	.....	0.04	− 0.76	0.02	0.0	2	25	0	6	.....	Southern Pacific Co.
Aptos	Santa Cruz	102	25	58.6	+ 0.8	75	6†	42	24	....	1.23	− 0.24	0.98	0.0	2	20	5	6	nw.	Do.
Arrowhead Springs	San Bernardino	2,000	1	73.6	.....	101	7	52	13	27	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	G. I. Royce.
Auburn	Placer	1,260	9	62.8	− 1.8	93	9	32	20	49	1.25	− 0.62	0.96	0.0	3	25	0	6	ne.	Southern Pacific Co.
Avalon	Los Angeles	.....	.....	64.7	.....	81	19	52	15	24	1.05	.....	0.53	0.0	5	25	4	2	w.	W. N. Vilas.
Azusa	do	540	8	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	A. P. Griffith.
Bagdad	San Bernardino	784	7	75.0	.....	101	10	49	23	39	0.00	.....	0.00	0.0	0	.....	.....	.....	.....	Santa Fe Co.
Bakersfield	Kern	404	21	69.7	+ 3.7	97	15	47	19	39	0.83	+ 0.36	0.27	0.0	4	26	0	5	.....	Do.
Barstow	San Bernardino	2,105	7	67.4	.....	97	4	39	21	48	0.35	.....	0.35	0.0	1	27	0	4	w.	E. L. White.
Berkeley	Alameda	317	23	59.6	+ 0.7	84	7	47	28	25	0.60	− 1.17	0.47	0.0	2	19	7	5	sw.	State University
Biggs	Butte	98	11	68.8	+ 6.4	95	8	50	13	....	0.65	− 0.87	0.30	0.0	3	20	1	10	s.	Southern Pacific Co.
Bishop	Inyo	4,450	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Chalfant.
Blocksburg	Humboldt	1,700	4	62.4	.....	86	28	34	24	43	0.77	.....	0.40	0.0	5	25	1	5	nw.	Victor Hope.
Blue Canon	Placer	4,695	11	57.2	+ 5.9	82	8	27	13	35	1.38	− 3.67	0.80	5.0	2	20	0	11	s.	Southern Pacific Co.
Blythe	Riverside	.....	1	70.6	.....	107	9	37	28	56	0.02	.....	0.02	0.0	1	22	7	2	sw.	H. V. Blenkiron.
Branscomb	Mendocino	2,000	10	56.7	.....	89	7	32	4	47	1.17	− 4.65	0.47	0.0	3	24	3	4	n.	A. J. Haun.
Brawley	Imperial	−105	1	74.5	.....	105	8†	44	23	46	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Weather Bureau.
Brush Creek	Butte	2,140	6	56.4	.....	90	7	32	18	50	2.20	.....	2.00	0.0	2	17	5	9	s.	Cal. Gas & Electric Co.
Calexico	Imperial	0	5	74.8	.....	102	9	50	21	38	0.00	.....	0.00	0.0	0	26	0	5	nw.	J. E. Peck.
Caliente	Kern	1,290	34	70.6	+ 5.8	78	18	62	11	....	0.00	− 0.47	0.00	0.0	0	.....	.....	.....	.....	Southern Pacific Co.
Calistoga	Napa	363	38	62.8	+ 2.8	88	18	50	1†	....	0.52	− 1.76	0.36	0.0	3	26	0	5	w.	Do.
Campbell	Santa Clara	217	13	59.8	+ 1.3	92	7	37	24	45	0.25	− 0.60	0.17	0.0	2	18	4	9	nw.	F. M. Righter.
Camptonville (near)	Yuba	3,500	3	62.0	.....	94	8	34	13	42	2.63	.....	1.34	0.0	3	19	8	4	.....	S. B. Johnson.
Cedarville	Modoc	4,675	16	50.6	+ 1.7	82	7†	25	13	45	0.48	− 1.12	0.40	0.0	3	23	8	0	sw.	T. H. Johnstone.
Chico	Butte	189	40	64.8	+ 0.4	94	7	40	28	45	0.50	− 0.91	0.25	0.0	3	23	2	6	n.	Butte Co. R. R.
China Flat	Humboldt	600	1	60.4	.....	85	8	36	24†	45	0.65	.....	0.42	0.0	2	20	7	4	nw.	O. I. Westerburg.
Chino	San Bernardino	714	18	67.4	+ 3.6	98	8	48	13	....	0.48	− 0.56	0.33	0.0	2	21	0	10	e.	Southern Pacific Co.
Cisco	Placer	5,939	39	45.4	− 1.3	66	2†	24	10†	....	0.60	− 1.66	0.50	6.0	2	23	0	8	.....	Do.
Claremont	Los Angeles	1,200	18	67.6	+ 5.2	104	8	43	12	46	0.40	− 0.82	0.20	0.0	5	20	8	3	w.	F. P. Brackett.
Cloverdale	Sonoma	340	8	63.5	.....	98	6	40	22†	45	1.01	.....	0.96	0.0	2	24	5	2	n.	Lloyd Browne.
Colfax	Placer	2,421	39	60.2	+ 0.7	87	1†	36	13†	37	2.39	+ 0.22	1.75	0.0	3	23	0	8	n.	Southern Pacific Co.
Colusa	Colusa	60	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. K. De Jarnatt.
Corning	Tehama	277	24	71.2	+ 6.4	90	1†	45	13	....	0.61	− 0.86	0.33	0.0	2	27	1	3	n.	Southern Pacific Co.
Cuyamaca	San Diego	4,677	11	56.3	+ 6.7	86	8	36	13	37	1.86	+ 0.11	0.96	0.0	3	15	11	5	e.	L. L. Macquarie.
Daunt	Tulare	4,000	3	46.4	.....	79	1	25	29	34	1.80	.....	1.20	0.0	2	22	3	6	.....	D. L. Wishon.
Davisville	Yolo	51	38	60.6	− 4.3	97	7	35	24†	52	0.12	− 0.75	0.12	0.0	1	9	16	6	s.	S. H. Beckett.
Deer Creek	Nevada	3,700	3	53.9	.....	86	8	30	13	42	2.72	.....	1.46	T.	3	17	8	6	w.	Cal. Gas & Electric Co.
Delta	Shasta	1,138	25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Denair	Stanislaus	126	10	63.1	− 0.4	99	8	39	14	47	0.04	− 0.51	0.04	0.0	1	26	4	1	nw.	Santa Fe Co.
Dobbins	Yuba	1,650	6	66.0	.....	94	7	42	13	36	1.15	.....	0.64	0.0	3	16	9	6	s.	Cal. Gas & Electric Co.
Dudleys	Mariposa	3,000	1	54.0	.....	87	7	30	14	48	1.18	.....	0.57	0.0	3	18	8	5	n.	W. H. Dudley.
Dunnigan	Yolo	65	33	71.9	+ 2.6	92	5†	49	31	....	0.13	− 0.90	0.13	0.0	1	22	5	4	n.	Southern Pacific Co.
Dunsmuir	Siskiyou	2,285	21	56.7	+ 4.3	87	7	37	4†	....	1.58	− 2.88	1.04	0.0	4	24	0	7	n.	Do.
Durham	Butte	160	15	64.2	+ 4.0	97	8	39	30†	46	0.60	− 1.06	0.44	0.0	3	24	3	4	s.	R. W. Durham
El Cajon	San Diego	482	11	65.6	+ 1.4	100	7	41	12†	54	0.94	+ 0.44	0.66	0.0	3	27	2	2	sw.	H. H. Kessler.
Electra	Amador	725	6	66.5	.....	97	7	43	14	39	0.95	.....	0.83	0.0	3	18	10	3	.....	Cal. Gas & Electric Co.
Elsinore	Riverside	1,234	15	66.4	+ 0.8	103	7	40	20†	54	0.53	+ 0.01	0.23	0.0	3	21	6	4	w.	W. H. Bohannon.
Emigrant Gap	Placer	5,230	36	49.8	− 0.9	79	7†	23	10	43	0.70	− 2.22	0.45	3.0	2	24	0	7	.....	Southern Pacific Co.
Escondido	San Diego	657	16	68.5	+ 7.0	98	9	29	12	51	1.08	+ 0.61	0.60	0.0	3	3	27	1	w.	A. R. Moon.
Eureka	Humboldt	64	24	52.9	− 0.2	66	8	42	28	21	0.82	− 2.08	0.52	0.0	7	8	9	14	nw.	U. S. Weather Bureau.
Farmington	San Joaquin	111	21	66.8	+ 3.1	94	8	47	13	....	0.38	− 0.51	0.28	0.0	2	23	6	2	nw.	Southern Pacific Co.
Folsom	Sacramento	252	38	65.4	+ 1.4	99	8†	42	31	46	0.73	− 0.63	0.66	0.0	3	25	1	5	s.	F. O. Hutton.
Fordyce Dam	Nevada	6,500	15	46.7	.....	67	8	28	14	30	1.35	− 3.36	0.75	6.0	2	13	15	3	sw.	E. E. Roening.
Fouts Springs	Colusa	1,650	6	60.1	.....	90	8	34	4	49	1.01	.....	0.40	0.0	3	.....	.....	.....	.....	H. S. Green.
Fresno	Fresno	293	23	66.8	+ 2.1	98	8	46	31	37	0.45	− 0.08	0.43	0.0	3	20	7	4	nw.	U. S. Weather Bureau.
Fruto	Glenn	624	21	64.2	0.0	90	5†	45	31	....	0.30	− 1.10	0.20	0.0	2	27	0	4	s.	Southern Pacific Co.
Galt	Sacramento	49	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Georgetown	El Dorado	2,650	37	62.6	− 1.0	90	7†	36	13	41	2.13	− 1.28	1.23	0.0	3	.....	.....	.....	.....	H. D. Jerrett.
Gilroy	Santa Clara	193	26	57.1	− 3.2	95	1†	40	11†	....	0.54	− 0.58	0.45	0.0	3	27	0	4	se.	Southern Pacific Co.
Gold Run	Placer	3,222	11	63.0	+ 1.5	89	8	35	12	38	1.75	− 1.56	1.00	0.0	3	23	3	5	se.	Do.
Gonzales	Monterey	127	11	59.2	+ 1.8	100	7	42	14	....	0.25	− 0.41	0.23	0.0	2	24	1	6	n.	Do.
Grass Valley	Nevada	2,690	38	59.9	.....	87	7†	31	13	37	2.68	+ 0.03	1.39	0.0	3	14	9	8	s.	F. R. Hull.
Greenville	Plumas	3,600	16	51.6	+ 1.9	85	7	22	28	56	0.27	− 2.53	0.16	0.0	2	22	3	6	sw.	C. H. Higbie.
Groveland	Tuolumne	2,828	1	59.2	.....	89	8	35	12	37	2.13	.....	1.68	0.0	3	17	12	2	.....	H. S. Richardson.
Guinda	Yolo	350	12	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Hanford	Kings	249	10	66.8	+ 4.0	96	8	42	14	42	0.31	+ 0.08	0.31	0.0	1	23	0	8	.....	Santa Fe Co.
Healdsburg	Sonoma	110	17	61.6	+ 2.2	98	7	38	23	50	1.19	− 1.39	0.65	0.0	2	29	0	2	s.	John Favour.
Hearst	Mendocino	1,800	....	60.2	.....	87	1	35	9†	43	0.75	.....	0.40	0.0	2	27	2	2	w.	H. D. Ellmaker.
Heber	Imperial	−20	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. T. Chumard.
Hollister	San Benito	284	36	62.0	+ 1.4	98	7	39	2†	48	0.18	− 0.57	0.09	0.0	2	19	3	9	w.	J. N. Thompson.
Hornbrook	Siskiyou	2,154	22	41.4	−10.7	70	1†	25	30	....	0.05	− 1.00	0.04	0.0	2	28	0	3	.....	Southern Pacific Co.
Hot Springs	Tulare	3,200	3	55.9	.....	88	9	35	12	36	1.28	.....	0.68	0.0	4	28	0	3	.....	U. S. Forest Service.
Hullville (near)	Lake	2,250	3	60.6	.....	91	6	34	4	46	1.49	.....	0.83	0.0	4	7	18	6	sw.	John Duggan.
Idyllwild	Riverside	5,250	9	52.8	.....	87	7	24	12	40	1.43	.....	0.80	0.0	3	22	4	5	sw.	Earl Powers.
Independence	Inyo	3,907	14	58.6	− 0.7	88	9	34	12	46	0.38	+ 0.06	0.23	0.0	3	22	6	3	n.	U. S. Weather Bureau.
Indio	Riverside	−20	32	75.6	+ 0.2	108	8	45	16	43	0.12	+ 0.04	0.12	0.0	1	22	9	0	nw.	F. N. Johnson.
Inskip	Butte	4,975	3	57.8	.....	82	25†	32	11†	36	2.83	.....	1.43	7.2	2	18	8	5	.....	Cal. Gas & Electric Co.
Ione	Amador	287	32	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Southern Pacific Co.
Iowa Hill	Placer	2,825	29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	C. F. Macy.
Jamestown	Tuolumne	1,471	7	64.8	.....	94	8	44	25	41	1.60	.....	1.20	0.0	2	26	3	2	.....	Sierra Ry. of California.
King City	Monterey	323	23	64.2	+ 4.9	104	8	33	24	63	0.04	− 0.75	0.04	0.0	1	27	0	4	n.	Southern Pacific Co.
La Porte	Plumas	5,000	16	52.8	+ 6.2	77	30	30	13	39	1.07	− 6.38	0.55	4.8	3	24	4	3	n.	C. W. Hendel.
Le Grand	Merced	255	10	63.2	− 1.6	92	7†	40	14†	42	0.83	− 0.41	0.50	0.0	2	24	0	7	.....	Santa Fe Co.
Lemon Cove	Tulare	600	15	68.6	+ 1.4	102	8	46	12	43	1.10	+ 0.35	1.10	0.0	1	17	9	5	n.	G. W. Sandidge.
Lick Observatory	Santa Clara	4,209	21	58.2	+ 4.2	81	7†	34	12	36	1.06	− 0.85	0.88	0.0	2	23	0	8	n.	The Director.
Livermore	Alameda	485	39	64.2	+ 1.4	99	8	41	2	46	0.29	− 0.56	0.18	0.0	2	17	6	8	n.	E. G. Still.
Lodi	San Joaquin	45	28	61.0	− 1.3	91	7	40	14	40	0.32	− 1.10	0.20	0.0	2	21	7	3	w.	Ezra Fiske.

TABLE 1.—*Climatological data for October, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Lone Pine	Inyo	2,728	5	58.4	.....	86	8	30	12	42	0.26	.....	0.26	0.0	1	18	12	1	s.	G. F. Marsh.
Long Valley	Lassen	4,400	1	52.0°	.....	81	7	30	28	37	0.61	.....	0.61	0.0	1	17	8	6	sw.	A. G. Evans.
Los Angeles	Los Angeles	293	33	67.2	+ 4.9	96	24	49	12	31	0.82	+ 0.08	0.73	0.0	5	23	5	3	sw.	U. S. Weather Bureau.
Los Banos	Merced	121	23	66.0	+ 1.8	90	8†	46	14	....	0.28	− 0.07	0.28	0.0	1	20	1	10	w.	Southern Pacific Co.
Los Gatos	Santa Clara	600	23	62.8	+ 2.1	95	7	41	27	39	0.60	− 1.70	0.30	0.0	3	21	4	6	n.	F. H. McCullagh.
Lytle Creek	San Bernardino	2,900	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Anderson.
Macdoel	Siskiyou	4,258	3	45.4	.....	79	7	21	26	46	1.11	.....	0.92	0.0	3	21	4	6	nw.	B. V. L. Co.
Madeline	Lassen	5,270	1	46.6	.....	82	7	23	2†	57	1.24	.....	1.01	2.0	5	20	6	5	nw.	J. H. Williams.
Magalia	Butte	2,321	6	60.9	.....	91	6	35	12	45	2.74	.....	2.20	0.0	3	22	6	3	se.	Butte County R. R. Co.
Mammoth Tank	Imperial	257	32	80.2	+ 3.4	108	8	48	18†	56	0.00	− 0.12	0.00	0.0	0	28	0	3	w.	Southern Pacific Co.
Marysville	Yuba	67	39	64.0	− 1.3	90	8†	43	24†	43	1.50	+ 0.45	1.00	0.0	2	27	0	4	s.	Do.
Mecca	Riverside	−185	4	74.4	.....	107	8	44	16	48	0.00	.....	0.00	0.0	0	25	4	2	e.	A. Lunsted.
Menlo Park	San Mateo	64	32	63.5	+ 4.3	88	8†	44	23†	....	0.28	− 0.73	0.28	0.0	1	24	0	7	n.	Southern Pacific Co.
Merced	Merced	173	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Santa Fe Co.
Mill Creek (1)	Amador	.....	3	57.2	.....	86	7†	37	13†	40	1.57	.....	1.32	0.0	3	24	4	3	e.	Cal. Gas & Electric Co.
Milton (near)	Calaveras	660	19	66.0	+ 1.8	95	8	47	14	37	0.35	− 0.88	0.27	0.0	2	24	5	2	.....	J. H. Southwick.
Modesto	Stanislaus	90	38	70.4	+ 5.1	98	7	45	31	....	0.80	− 0.24	0.80	0.0	1	22	2	7	.....	Southern Pacific Co.
Mojave	Kern	2,751	33	73.6	+ 8.0	99	26†	50	15†	44	0.40	+ 0.15	0.20	0.0	3	26	0	5	.....	Do.
Mokelumne Hill	Calaveras	1,550	17	65.2	+ 6.9	92	7	44	13†	41	0.89	− 0.85	0.66	0.0	3	21	5	5	.....	C. E. Prindle.
Mono Ranch	Ventura	3,210	4	57.5	.....	84	7†	33	12	37	0.77	.....	0.58	0.0	2	20	8	3	w.	H. Lathrop.
Montague	Siskiyou	2,450	22	50.4	− 6.1	88	8	15	28	59	0.50	− 0.13	0.40	0.0	2	17	8	6	n.	G. H. Chambers.
Monterey	Monterey	15	45	55.8	− 2.4	76	8	42	28	....	0.94	+ 0.09	0.73	0.0	3	25	1	5	sc.	Southern Pacific Co.
Monterio	Kern	4,500	11	62.4	+ 0.7	84	9	34	12	44	0.84	− 0.17	0.72	0.0	3	15	10	6	nw.	John C. Knecht.
Monumental	Del Norte	.....	5	54.8	.....	82	7	30	30	45	3.47	.....	1.30	0.0	8	21	1	9	.....	G. F. Morgan.
Mount Tamalpais	Marin	2,375	11	60.6	+ 1.9	87	7	40	12	29	0.91	− 1.29	0.58	0.0	3	17	6	8	nw.	U. S. Weather Bureau.
Napa City	Napa	20	33	61.1	+ 2.4	92	7	38	23	44	0.90	− 0.51	0.60	0.0	2	16	9	6	s.	Thomas Hull.
Napa (S. H.)	...do	60	32	63.3	+ 4.6	96	7	44	24†	44	0.84	− 0.62	0.58	0.0	3	22	4	5	sw.	W. H. Martin.
Needles	San Bernardino	477	18	73.5	+ 1.3	95	7	50	15	37	0.00	− 0.11	0.00	0.0	0	29	2	0	w.	Santa Fe Co.
Nellie	San Diego	5,350	1	60.6	.....	84	7†	38	14†	41	2.20	.....	1.00	T.	3	30	1	0	.....	C. J. Bailey.
Nevada City	Nevada	2,580	18	58.6	+ 4.6	96	7†	30	13†	54	2.55	− 0.16	1.45	0.0	4	21	5	5	sw.	S. W. Marsh.
Newcastle	Placer	970	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	George D. Kellog.
Newhall	Los Angeles	1,200	33	67.9	+ 5.8	102	7	48	13	....	1.00	+ 0.28	0.48	0.0	5	28	0	3	.....	Southern Pacific Co.
Newman	Stanislaus	91	21	67.8	+ 3.3	96	8	48	16	41	0.12	− 0.70	0.12	0.0	1	26	0	5	n.	E. S. Wangenheim.
Nimshew	Butte	2,500	6	59.6	.....	86	5†	38	4	42	2.67	.....	1.68	0.0	4	18	8	5	n.	Cal. Gas & Electric Co.
North Bloomfield	Nevada	3,200	13	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. G. Shand.
North Fork	Madera	3,000	6	61.2	.....	96	6	34	14	46	2.00	.....	1.65	0.0	3	18	8	5	nw.	G. H. Shinn.
Oakdale	Stanislaus	156	16	65.0	+ 2.5	97	8	48	31	....	0.16	− 0.98	0.09	0.0	2	23	6	2	nw.	Southern Pacific Co.
Oakland	Alameda	36	34	59.8	+ 1.4	80	7†	47	23†	27	0.55	− 1.14	0.44	0.0	2	20	6	5	nw.	Chabot Observatory.
Oceanside	San Diego	.....	.....	63.6	.....	80	24	47	12	24	0.66	.....	0.40	0.0	3	17	11	3	w.	H. D. Brodie.
Ojai Valley	Ventura	900	4	65.6	.....	100	24	39	12	52	0.69	.....	0.28	0.0	6	22	8	1	sw.	W. H. Duncan.
Orland	Glenn	254	28	66.9	+ 0.5	94	7†	44	31	46	0.43	− 0.69	0.24	0.0	2	24	4	3	n.	W. W. Patch.
Orleans	Humboldt	520	7	64.6	.....	93	7	38	28	51	0.94	.....	0.68	0.0	5	20	0	11	.....	Fred T. Hale.
Oroville (near)	Butte	250	26	66.6	0.0	95	7†	45	13†	39	0.47	− 1.31	0.47	0.0	1	17	4	10	s.	E. D. Fairchild.
Palermo	...do	213	19	64.6	+ 2.7	96	7	41	13†	48	0.50	− 1.50	0.25	0.0	2	14	13	4	s.	Miss Hettie Boalt.
Palm Springs	Riverside	584	21	74.6	+ 0.1	102	7†	58	12†	....	0.36	+ 0.21	0.26	0.0	2	23	6	2	w.	Southern Pacific Co.
Pasadena	Los Angeles	827	20	66.9	+ 2.1	100	6†	42	12	46	0.75	− 0.23	0.38	0.0	5	28	2	1	sw.	E. R. Sorver.
Paso Robles	San Luis Obispo	800	23	61.6	+ 1.8	104	8	32	26	62	0.27	− 0.72	0.11	0.0	4	22	5	4	nw.	Dr. F. W. Sawyer.
Peachland	Sonoma	190	14	61.6	+ 3.0	98	25	36	4†	57	0.94	− 2.91	0.55	0.0	3	23	5	3	sw.	E. H. Parnell.
Penstock Camp	Tuolumne	3,750	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Tuolumne W. P. Co.
Placerville	El Dorado	1,875	21	54.2	− 1.3	92	2	38	14†	40	1.79	− 0.75	1.08	0.0	3	27	1	3	w.	A. Baring Gould.
Point Lobos	San Francisco	250	17	59.4	+ 3.1	84	7	47	29	26	0.48	− 0.85	0.36	0.0	3	8	6	17	w.	John Hyslop.
Point Reyes	Marin	490	18	55.1	+ 0.4	78	7	44	1	27	0.27	− 1.83	0.19	0.0	5	11	5	15	n.	U. S. Weather Bureau.
Porterville	Tulare	464	21	68.2	+ 3.6	102	8	43	14	47	0.64	+ 0.06	0.49	0.0	6	23	6	2	.....	Harry E. Cowie.
Quincy	Plumas	3,400	15	53.4	+ 3.8	80	1†	22	28	52	2.22	− 1.07	2.00	0.0	2	23	2	6	sw.	D. N. Rogers.
Red Bluff	Tehama	307	33	66.3	+ 2.5	92	7	45	31	34	0.30	− 1.06	0.21	0.0	4	25	3	3	nw.	U. S. Weather Bureau.
Redding	Shasta	552	35	66.6	+ 2.1	90	5	44	31	38	0.48	− 2.00	0.29	0.0	3	11	3	17	n.	L. F. Bassett.
Redlands	San Bernardino	1,352	17	67.2	+ 2.2	101	7†	43	13†	44	0.51	− 0.17	0.16	0.0	4	20	8	3	w.	Paul W. Moore.
Reedley	Fresno	347	10	65.6	+ 1.6	97	8†	45	31	44	1.12	+ 0.08	1.12	0.0	1	27	1	3	n.	Santa Fe Co.
Rialto (near)	San Bernardino	2,250	4	70.4	.....	96	7†	45	13†	31	0.59	.....	0.30	0.0	3	23	2	6	se.	So. California Edison Co.
Riverside	Riverside	851	28	66.7	+ 2.5	103	7	41	12†	53	0.59	+ 0.07	0.32	0.0	4	20	7	4	w.	C. W. Barton.
Rocklin	Placer	249	39	71.8	+ 8.2	105	3	42	31	50	0.62	− 0.52	0.62	0.0	1	21	0	10	ne.	Southern Pacific Co.
Rohnerville	Humboldt	75	7	54.9	.....	79	8	36	24	34	1.01	.....	0.58	0.0	5	17	7	7	n.	Dr. R. Callahan.
Sacramento (1)	Sacramento	71	33	64.6	+ 2.4	93	8	44	31	33	0.28	− 0.62	0.28	0.0	2	22	5	4	s.	U. S. Weather Bureau.
Sacramento (2)	...do	35	57	61.8	− 0.9	86	7†	44	31	33	0.34	− 0.50	0.30	0.0	2	20	5	6	nw.	S. H. Gerrish.
St. Helena	Napa	255	2	62.8	.....	97	7	38	22†	54	0.82	.....	0.69	0.0	3	23	1	7	.....	B. F. Kettlewell.
Salinas	Monterey	40	36	60.8	+ 3.3	95	7	39	26	41	0.31	− 0.45	0.20	0.0	3	10	21	0	w.	Miss E. Ruth Abbott.
San Bernardino	San Bernardino	1,054	18	67.4	+ 4.3	105	7†	41	13	55	1.04	+ 0.45	0.39	0.0	4	18	10	3	sw.	Dr. A. K. Johnson.
San Diego	San Diego	93	39	64.0	+ 1.0	87	24	50	13	33	1.35	+ 0.95	0.75	0.0	3	22	5	4	nw.	U. S. Weather Bureau.
San Francisco	San Francisco	207	39	61.2	+ 2.8	89	7	47	28	29	0.65	− 1.05	0.48	0.0	3	16	9	6	w.	Do.
San Jacinto	Riverside	1,550	17	67.4	+ 5.2	103	7†	40	12	48	0.90	+ 0.02	0.32	0.0	3	22	4	5	w.	E. T. Tanner.
San Jose	Santa Clara	95	35	61.2	+ 0.9	91	7	40	23	42	0.20	− 0.68	0.17	0.0	2	18	7	6	nw.	U. S. Weather Bureau.
San Leandro	Alameda	48	15	59.2	− 2.3	94	7	37	23	49	0.47	− 1.09	0.39	0.0	2	24	2	5	w.	E. B. Sanford.
San Luis Obispo	San Luis Obispo	201	15	64.0	+ 4.8	95	24	42	28	43	0.30	− 0.74	0.13	0.0	5	17	8	6	nw.	U. S. Weather Bureau.
San Mateo	San Mateo	22	36	62.8	+ 3.8	86	6†	48	23†	....	0.51	− 0.79	0.44	0.0	3	14	12	5	nw.	Southern Pacific Co.
San Miguel	San Luis Obispo	616	23	66.6	+ 4.7	94	9	43	14†	....	0.07	− 0.64	0.07	0.0	1	19	10	2	.....	Do.
San Miguel Island	Santa Barbara	500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Capt. W. G. Waters.
Sanger	Fresno	371	21	71.5[4]	+ 5.4	95	1	60	15†	....	0.70	− 0.27	0.59	0.0	2	.....	.....	.....	.....	Southern Pacific Co.
Santa Barbara	Santa Barbara	130	26	62.9	+ 0.3	91	24	43	12	42	0.29	− 0.48	0.19	0.0	3	26	4	1	w.	George W. Russell.
Santa Clara	Santa Clara	90	21	61.4	+ 2.3	95	7	37	2†	49	0.18	− 0.92	0.12	0.0	2	26	1	4	nw.	Santa Clara College.
Santa Cruz	Santa Cruz	20	37	59.2	− 0.5	96	7	39	15†	48	1.21	− 0.56	0.60	0.0	3	21	5	5	w.	W. R. Springer.
Santa Magarita	San Luis Obispo	996	21	67.2	+ 8.0	93	6	50	29†	....	0.05	− 1.82	0.05	0.0	1	.....	.....	.....	.....	Southern Pacific Co.
Santa Maria	Santa Barbara	220	22	64.6	+ 2.3	92	5	40	15	27	0.72	− 0.29	0.45	0.0	3	23	2	6	w.	L. E. Blochman.
Santa Monica	Los Angeles	110	25	59.9	− 4.9	92	24	44	12	30	0.82	+ 0.10	0.59	0.0	3	20	8	3	w.	N. D. Ingham.
Santa Rosa	Sonoma	181	21	59.6	0.0	96	7	36	23	51	0.68	− 1.68	0.35	0.0	3	16	8	7	sw.	M. L. McDonald, jr.
Selma	Fresno	311	24	66.6	+ 2.6	90	8	50	11†	....	0.55	− 0.10	0.50	0.0	2	25	4	2	nw.	Southern Pacific Co
Shasta	Shasta	1,049	14	69.2	+ 4.6	100	4†	39	12†	58	0.75	− 2.59	0.42	0.0	3	28	1	2	nw.	Dr. T. J. Edgecomb.
Sierra Madre	Los Angeles	1,400	13	67.8	+ 4.0	96	7†	47	12†	33	0.73	− 0.59	0.42	0.0	5	21	4	6	s.	Mrs. A. C. Gregory.
Sierraville	Sierra	5,000	....	49.2	.....	85	7	22	27	52	0.02	.....	0.02	0.0	1	19	4	8	sw.	C. D. Johnson.
Sisson	Siskiyou	3,555	21	52.4	+ 2.4	82	6	27	14	49	0.92	− 2.46	0.73	0.0	3	25	0	6	n.	Southern Pacific Co.
Soledad	Monterey	188	36	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Do.
Southeast Farallon	San Francisco	30	7	53.2	.....	66	19	47	28	12	0.39	.....	0.29	0.0	6	10	10	11	nw.	U. S. Weather Bureau.
Sonora	Tuolumne	1,825	22	60.6	.....	87	7†	40	14	34	1.67	− 0.84	1.27	0.0	2	19	9	3	sw.	Charles P. Jones.
Stirling City	Butte	3,525	6	56.4	.....	89	27	33	13	41	2.15	.....	1.50	0.0	3	14	14	3	se.	Butte County R. R. Co.
Stockton (S. H.)	San Joaquin	23	39	63.8	+ 2.1	90	8	42	14	33	0.21	− 0.41	0.11	0.0	2	25	4	2	nw.	State Hospital.
Storey	Madera	296	10	64.4	+ 1.6	98	1	42	14†	43	0.80	+ 0.58	0.50	0.0	2	26	1	4	nw.	Santa Fe Co.
Suisun	Solano	20	30	49.9	−10.1	72	18†	40	6†	....	0.25	− 0.89	0.25	0.0	1	22	0	9	.....	Southern Pacific Co.
Summerdale	Mariposa	5,270	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. H. Lowry.

TABLE 1.—*Climatological data for October, 1910. District No. 11*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
California—Cont'd.																				
Summit	Placer	7,017	37	52.7	+ 8.7	90	7	25	13	50	0.50	− 2.02	0.30	3.0	2	25	0	6	sw.	Southern Pacific Co.
Susanville	Lassen	4,175	21	51.2	+ 0.6	81	9	27	28	38	0.58	− 1.07	0.50	0.0	3	18	10	3	nw.	James Branham.
Tamarack	Alpine	8,000	4	41.7	.....	69	8	16	14	36	2.03	.....	1.08	13.0	3	21	3	7	sw.	William Bennett.
Tehachapi	Kern	3,964	33	60.9	+ 4.8	82	7	45	13	....	0.61	+ 0.16	0.49	0.0	2	....	....	....	.....	Southern Pacific Co.
Tehama	Tehama	220	39	60.4	− 4.0	82	14	34	30†	....	0.52	− 0.76	0.32	0.0	3	31	0	0	s.	Do.
Three Rivers	Tulare	870	....	64.4	.....	97	8	38	14	42	1.75	.....	1.06	0.0	5	16	11	4	sw.	E. D. Barton.
Towle	Placer	3,704	24	57.0	+ 1.2	84	7†	31	13	39	1.96	− 0.65	1.05	0.0	3	25	4	2	n.	Southern Pacific Co.
Tracy	San Joaquin	64	30	76.3	+12.8	88	14†	67	15†	....	0.10	− 0.50	0.05	0.0	2	27	0	4	nw.	Do.
Ukiah	Mendocino	620	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. George McGowen.
Upland	San Bernardino	1,750	13	65.0	+ 2.5	98	7	42	12†	41	0.38	− 0.72	0.18	0.0	3	21	5	5	w.	A. P. Harwood.
Upper Lake	Lake	1,350	25	58.5	− 1.3	90	6*	36	4	42	0.76	− 0.73	0.43	0.0	3	24	3	4	.....	C. M. Hammond.
Vacaville	Solano	175	22	61.4	− 3.0	97	7	44	2	47	0.64	− 0.80	0.47	0.0	2	21	10	0	sw.	G. O. Coburn.
Valley Springs	Calveras	673	21	67.2	+ 4.0	92	7	53	14	....	0.42	− 1.01	0.30	0.0	2	24	4	3	nw.	Southern Pacific Co.
Visalia	Tulare	334	22	61.4	− 0.6	82	1	40	15†	38	0.15	− 0.45	0.15	0.0	2	16	12	3	nw.	Santa Fe Co.
Warner Springs	San Diego	3,165	2	62.2	.....	95	8†	36	12	46	0.79	.....	0.41	0.0	3	28	3	0	.....	Mrs. E. F. Sanford.
Waseo	Kern	336	10	71.0*	+ 6.4	99	8	46	15	42	0.25	+ 0.03	0.25	0.0	1	....	....	....	.....	Santa Fe Co.
Watsonville	Santa Cruz	23	14	58.4	0.0	92	7	37	2†	46	0.71	− 1.05	0.50	0.0	3	12	14	5	.....	Spreckels Sugar Co.
Westley	Stanislaus	90	21	68.8	+ 2.6	92	8	50	12†	....	0.20	− 0.63	0.20	0.0	1	26	0	5	.....	Southern Pacific Co.
Wheatland	Yuba	84	23	63.5	+ 1.0	90	8	42	31	36	0.58	− 1.09	0.37	0.0	3	22	5	4	s.	Wm. Lumbard.
Willows	Glenn	136	31	64.8	− 0.4	90	5	41	31	45	0.17	− 0.82	0.10	0.0	3	22	3	6	n'	M. T. Harrington, jr.
Yosemite	Mariposa	3,945	6	53.7	.....	89	8	29	19	49	1.47	.....	1.20	0.5	2	19	9	3	sw.	C. W. Tucker.

a, b, c, etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
§§ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
‖ Estimated by observer.
¶ Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 11, California.*

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon.																																	
Klamath Agency	Klamath					1.10							.70																				1.80
Klamath Falls	do	.01		.23								1.25	.03					.10														1.62
Lakeview	Pitt																																
Long Valley	do	T.		.48								.35	.17	.01				.07														1.08
Merrill	Interior Drainage											.91																				0.91
Yonna	do	.03		.36							.02	.73	.05					.19														1.38
California.																																	
Aguanga	Coast											.13			.33	.22																0.68
Alameda	do												T.																			T.
Alturas	Sacramento			.06	.16							.46	.03	.20				.10														1.01
Anderson	do																																
Angles Camp	San Joaquin												1.65																			1.65
Angiola	do										.27			.30																		0.57
Antioch	do											.02	.02																			0.04
Aptos	Coast												.98	.25																		1.23
Arrowhead Springs	do																															0.00
Auburn	Sacramento											.20	.96	.09																		1.25
Avalon	Ocean											.05		.39	.53	.07												.01				1.05
Azusa	Coast																																
Bagdad	Desert																															0.00	
Bakersfield	San Joaquin											.25		.23	.27	.08																0.83
Barstow	Desert															.35																0.35
Bear River	San Joaquin																																
Bear Valley (1)	Sacramento										.60	.92	.20																			1.72
Bear Valley (2)	San Joaquin											.20			.10	.45																0.75
Bear Valley Dam	Coast																																
Ben Lomond	do										T.	1.42	.38																			1.80
Berkeley	do											.13	.47																			0.60
Big Bar	Sacramento																																
Biggs	do	.25										.30	.10																			0.65
Bishop	Owens																																
Bishop Creek	do																																
Blocksburg	Coast			.40								.10	.11	.10				.06														0.77
Blue Canyon	Sacramento											.58	.80	T.																		1.38
Blythe	Desert	.02													T.																	0.02
Boulder Creek	Coast										T.	.10	1.17	.45																		1.72
Bowmans Dam	Sacramento																																
Branscomb	Coast			.47							T.	.42	.28																			1.17
Brawley	Desert																																
Brush Creek	Sacramento			T.							T.	2.00	.20																			2.20
Burney	do																																
Butte Creek House	do										T.	.53	.13																			0.66
Butte Valley	do																															0.00	
Calexico	Desert																															0.00	
Caliente	San Joaquin											.03	.13	.36																		0.52
Calistoga	Coast										T.	.08	.17																			0.25
Campbell	do														.15	.88																1.03
Campo	do											1.34	1.25	.04																		2.63
Camptonville (near)	Sacramento											.07																				0.48
Cedarville	Mountain Lakes	.01		.40													T.															0.65
Chester	Sacramento			.04							.01	.43	.17																			0.50
Chico	do											.03	.25	.22																		0.66
Chico (near)	do										T.	T.	.66																			0.65
China Flat	Coast			.42							T.	T.	.23					T.														0.48
Chino	do											.33			.15																	0.60
Cisco	Sacramento											.10	.50																			0.40
Claremont	Coast											.17	.01			.20	.01	.01										T.			T.	
Clear Lake	Klamath																															1.01	
Cloverdale	Coast												.96	.05																		2.59
Colfax	Sacramento											.68	1.75	.16																		1.05
Colgate	do											.38	.61	.06																		0.61
Colusa	do																															0.37	
Corning	do											.28	.33																			1.86
Corona	Coast												.05		.32																	1.80
Crockers	San Joaquin																															0.12	
Cuyamaca(1)	Coast											.26		T.	.64	.96																2.72
Daunt	San Joaquin											1.20				.60																
Davisville	Sacramento												.12																			
Deer Creek	do			T.							T.	1.46	1.24	.02																		
Delta	do																															0.04	
Denair	San Joaquin											.04																				1.86
Descanso	Coast															.91	.95															
Dinuba	San Joaquin																															1.15	
Dobbins	Sacramento			T.							T.	.50	.64	.01																		
Dorris	Klamath																															1.25	
Downieville	Sacramento			T.							T.	.70	.50	.05																		1.18
Dudleys	San Joaquin										T.	.55	.57	.06																		0.13
Dunnigan	Sacramento												.13																			1.58
Dunsmuir	do				.08							.22	1.04	.24																		0.60
Durham	do			T.							T.	.04	.44	.12																		0.45
Dyerville	Coast			.22								.23																				0.12
Edgewood	Klamath											.12																				0.85
Edison	San Joaquin											.39			.27	.19																0.94
El Cajon	Coast											.04			.24	.66																0.95
Electra	San Joaquin											.83	.09	.03																		0.53
Elsinore	Coast													.09	.23	.21																0.70
Emigrant Gap	Sacramento										.45	.25																				1.08
Escondido	Coast											.13			.35	.60																0.82
Eureka	do	.05		.52								.16	.06					.01				.01							.01			1.37
Fairmont	do											.57		.15	.65	T.													T.			0.38
Farmington	San Joaquin											.10	.28																			1.39
Felton	Coast											.10	.65	.64																		0.85
Firebaugh	San Joaquin											.78	.07																			0.73
Folsom	Sacramento				T.							.06	.66	.01																		1.35
Fordyce Dam	do			T.								.60	.75																			1.20
Fort Bragg	Coast			.60							.11	.35	.14																			
Fort Ross	do																															1.01	
Fouts Springs	Sacramento			T.								.40	.38	.23																		1.77
Fredalba	Coast											.58			.65	.54																0.45
Fresno	San Joaquin										.01	.42	T.	.02																		0.30
Fruto	Sacramento												.10	.20																		
Galt	San Joaquin																															2.13	
Georgetown	do		T.									.74	1.23	.16																		0.54
Gilroy	Coast											.09	.45	.03																		

TABLE 2.—*Daily precipitation for October, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Gilta	Coast			.99						.04		.03	.15	.02			.04															1.27
Glendora	do													.10	.20	.22														.16		0.68
Glen Ranch	do												.20			.36	.13															0.69
Glennville	San Joaquin											.74		.10	.31	.20														.04		1.39
Glenwood	Coast											.11	.86	.55																		1.52
Gold Run	Sacramento											.60	T.	1.00	.15																	1.75
Gonzales	Coast											T.	.23	.02																		0.25
Grass Valley	Sacramento			T.	T.						T.	1.23	1.39	.06																		2.68
Greenville	do			T.								.16	.11																			0.27
Gridley	do			.01									.35	.05																		0.41
Groveland	San Joaquin												1.68	.43	.02															T.		2.13
Guinda	Sacramento																															
Hanford	San Joaquin										.31																					0.31
Head Dam	Sacramento											.77	.85	.02																		1.64
Healdsburg	Coast											.65	.54																			1.19
Hearst	do				.35	.40																										0.75
Heber	Desert																															
Helen Mine	Coast			.05								1.13	1.40	.04																		2.62
Hesperia	Desert											.04			.13	.02																0.19
Holcomb	Coast																															
Hollister	do												.09	.09																		0.18
Hornbrook	do	.01											.04																			0.05
Hot Springs	San Joaquin											.68	.36		.20		.04															1.28
Hullville	Coast			.08								.40	.83	.18																		1.49
Idyllwild	do											.09			.54	.80																1.43
Independence	Owens											T.		.05	.10	.23																0.38
Indio	Desert														.12																	0.12
Inskip	Sacramento			T.							T.	1.43	1.40																			2.83
Ione	San Joaquin																															
Iowa Hill	Sacramento																															
Isabella	San Joaquin																															
Jacksonville	do											.80	.55	.15																		1.45
Jamestown	do											1.20	.40																			1.60
Jenny Lind	do																															
Johnsville	Mountain Lakes																															
Jolon	Coast												.44	.16																		0.60
Julian	do															1.50																1.50
Kennedy Mine	San Joaquin																															‡1.09
Kennett	Sacramento												1.34	.60																		1.94
Kentfield	Coast											1.30	1.60																			2.90
Kernville	San Joaquin											.20			.18	.39																0.77
King City	Coast												.04																			0.04
Knights Landing	Sacramento											T.	.10	.02						..												0.12
Knob	do																															
La Grange	San Joaquin											.67																				0.67
Lake Eleanor	do																															
Lakeside	Coast														.30										.50							0.80
La Porte	Sacramento			T.							T.	.55	.50	.02		T.																1.07
Lathrop	San Joaquin												.18	.04																		0.22
Laurel	Coast											.15	.95	.50																		1.60
Laytonville	do														.75																	0.75
Le Grand	San Joaquin										.50	.33																				0.83
Lemon Cove	do											T.	1.10	T.		T.																1.10
Letter Box	Sacramento																															
Lick Observatory	Coast												1.06																			1.06
Livermore	do										T.	.18	.11																	T.		0.29
Lodi	San Joaquin										T.	.12	.20																			0.32
Lone Pine	Owens											T.		T.	T.	.26																0.26
Long Camp	San Joaquin													2.50																		2.50
Long Valley	Mountain Lakes											.61																				0.61
Lordsburg	Coast											.10				.20	.12															0.42
Los Alamos	do											.12			T.																	0.12
Los Angeles	do	T.										.05		.21	.52	.03													.01			0.82
Los Banos	San Joaquin											.28																				0.28
Los Burros Mine	Coast																															
Los Gatos	do										.02	.30	.28																			0.60
Los Vaqueros	do																															
Lowe Observatory	do	.05										.20				.72														.08		1.05
Lytle Creek	do																															
McCloud	Sacramento			.05								.60	.82	.04																		1.51
Macdoel	Klamath				.15							.92					.04															1.11
Madeline	Mountain Lakes			.10	.07						T.	1.01	.03				.03															1.24
Magalia	Sacramento										.06	2.20	.48																			2.74
Mammoth Tank	Desert																															0.00
Mariposa	San Joaquin											1.19	1.25	.05																		2.49
Marysville	Sacramento											.50	1.00																			1.50
Mecca	Desert																															0.00
Melones	San Joaquin											.80	.48	.20																		1.48
Menlo Park	Coast												.28																			0.28
Merced	San Joaquin																															
Merced Falls	do										.47	.22																				0.69
Mesa Granda	Coast											.13			1.10	.18																1.46
Mill Creek (1)	San Joaquin											1.32	.24	.01																.05		1.57
Mill Creek (2)	Coast											.42			.26	.80																1.48
Mills College	do											.16	.21																			0.37
Milo	San Joaquin											.92	.23	.38																		1.53
Milton (near)	do										.27	.08																				0.35
Modesto	do				..							T.	.80																			0.80
Mojave	Desert									.10				.20		.10																0.40
Mokelumne Hill	San Joaquin										.66	.14	.09																			0.89
Mono Ranch	Coast											.19		T.	T.	.58																0.77
Montague	Klamath	.10										.40																				0.50
Monterey	Coast											.06	.73	.15																		0.94
Monterio	San Joaquin											.10		.02	.72																	0.84
Montgomery Creek	Sacramento											.60	.25	.17																		1.02
Monumental	Coast	.10	1.30	.65		T.					.10	.20	.60				.42	.10														3.47
Morena Dam	do																															
Mount Tamalpais	do										.14	.54	.23																			0.91
Mount St. Helena	do																															0.00
Napa City	do										.60	.30																				0.90
Napa (S. H.)	do											.12	.58	.14																		0.84
Needles	Desert																															0.00
Nellie	Coast											.25	1.00	T.		.95																2.20
Nevada City	Sacramento			.01							T.	1.04	1.45	.05																		2.55

TABLE 2.—*Daily precipitation for October, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Newcastle	Sacramento																																
Newhall	Coast											.10		.15	.48	.22													.05				1.00
Newman	San Joaquin												.12																				0.12
Nimshew	Sacramento			T.						T.	.02	.94	1.68	.03																			2.67
North Bloomfield	do																																
North Fork	San Joaquin											1.65	.20	.15																			2.00
North Lakeport	Coast																																
Oakdale	San Joaquin											.09	.07																				0.16
Oak Grove	Coast											.02			.34	.61																	0.97
Oakland	do											.11	.44																				0.55
Oakville	do												.27	.13																			0.40
Oceanside	do										.21	T.		.05	.40	T.													T.			0.66
Ojai Valley	do		T.									.13		.06	.28	.12												T.	.02		.08		0.69
Orland	Sacramento									T.	T.	.19	.24																				0.43
Orleans	Klamath			.68						T.	.02	.10	.09				.05																0.94
Oroville	Sacramento										T.	.47																					0.47
Ozena	Coast													.25		.50																	0.75
Palermo	Sacramento			T.								.25	.25																				0.50
Palm Springs	Desert														.26	.10																	0.36
Parkfield	Coast											.06	.30	.04																			0.40
Pasadena	do											.15	.14	.38	.15	.11	.01																0.75
Paso Robles	do											.05	.08	.11	.03																		0.27
Peachland	do											.38	.55	.01																			0.94
Penstock Camp	San Joaquin																																
Peyton	Sacramento																																
Phoenix Dam	San Joaquin											1.40	.43	.02																			1.85
Pilot Creek	Sacramento										T.	.94	1.46	.26																			2.66
Pine Crest	Coast															.32															.03	.02	0.37
Pittville	Sacramento																																
Placerville	do											.62	1.08	.09																			1.79
Point Lobos	Coast			T.							.04	.08	.36																	T.			0.48
Point Loma	do	.01		T.	T.			.01	.02	.03	.02	T.			.95	.65	.59		.02				.02	T.		.01							2.53
Point Reyes	do			.01						.02	.02	.08	.14				T.																0.27
Polasky	San Joaquin											.59	.58																				1.17
Porterville	do										.49	.08	.01	.02	.03	.01																	0.64
Priest Valley	Coast												.61	.35																			0.96
Quincy	Sacramento			T.							T.	.22				2.00																	2.22
Red Bluff	do										.02	.07	.17	.04																			0.30
Redding	do			T.								.14	.29	.05																			0.48
Redlands	Coast											.16			.10	.16	.09																0.51
Reedley	San Joaquin											1.12																					1.12
Represa	Sacramento										.10	.69																					0.79
Rialto (near)	Coast											.15			.30	.14																	0.59
Rio Vista	Sacramento												.12	.08																			0.20
Riverside	Coast	.02										.18			.32	.07																	0.59
Rocklin	Sacramento											.62																					0.62
Rohnerville	Coast			.58						T.	T.	.21	.10	.08			.04																1.01
Sacramento (1)	Sacramento											.27	.01																				0.28
Sacramento (2)	do										T.	.30	.04																	T.			0.34
Saint Helena	Coast											.08	.69	.05																			0.82
Salinas	do											.04	.20	.07																			0.31
San Bernardino	do											.27			.18	.20	.39																1.04
San Diego	do													.52	.23	.60																	1.35
San Francisco	do			T.							.04	.39	.22																				0.65
San Jacinto	do										.28			.30	.32																			0.90
San Jose	do											.10	.10																				0.20
San Leandro	do										T.	.39	.08	T.																T.	T.		0.47
San Luis Obispo	do										T.	.12	.13	.01		.02														.02			0.30
San Mateo	do											.02	.44	.05																			0.51
San Miguel	do											T.	.07																				0.07
San Miguel Island	Ocean																																
Sanger	San Joaquin											.59	.11																				0.70
Santa Ana River	Coast											.55			.49	.40														.02			1.49
Santa Barbara	do	T.					T.	T.				.08				.19							T.					T.		.02			0.29
Santa Clara	do											.06	.12																				0.18
Santa Cruz	do										.15	.60	.46																				1.21
Santa Margarita	do										.05																						0.05
Santa Maria	do											.15	.45			.12																	0.72
Santa Monica	do											.07			.17	.59																	0.82
Santa Rosa	do										T.	.30	.35	.03																			0.68
Sausalito	do												.60	.10																			0.70
Selma	San Joaquin											.50	.05																				0.55
Seven Oaks	Coast													.75	.06																		0.81
Shasta	Sacramento											.31	.42	.02																			0.75
Shingle Springs	San Joaquin																																
Sierra Madre	Coast											.18		.05	.42	.03														.05			0.73
Sierraville	Mountain Lakes											.02																					0.02
Sisquoc Ranch	Coast																		.25	.11													0.36
Sisson	Sacramento										.12	.73	.07																				0.92
Soledad	Coast																																
Sonora	San Joaquin											1.27	.40																				1.67
Southeast Farallon	Ocean			.01							.01	.18	.17	.01																T.	.01		0.39
Spreckels	Coast											.02	.29	.05																	.01		0.37
Squirrel Inn	do											2.02			.49	.18																	2.69
Stirling City	Sacramento											.35	1.50	.30																			2.15
Stockton (S. H.)	San Joaquin										T.	.10	.11																				0 21
Story	do										T.	.50	.30																				0.80
Suisun	Sacramento														.25																		0.25
Summerdale	San Joaquin																																
Summit (1)	Sacramento										.20	T.	.30																				0.50
Summit (2)	Coast											.17			.43	.29																	0.89
Surrey	do											.26		.17	.28	.02													T.				0.73
Susanville	Mountain Lakes				.06							.50	.02																				0.58
Tamarack	Sacramento											.80	1.08		.15																		2.03
Tehachapi	San Joaquin											.12			.49																		0.61
Tehama	Sacramento										.01	.19	.32																				0.52
Three Rivers	San Joaquin											1.06	.02	.08		.58	.01																1.75
Towle	Sacramento											.72	1.05	.19																			1.96
Tracy	San Joaquin												.05	.05																			0.10
Tulare	do											.30				.10																	0.40
Tustin (near)	Coast											.08			.04	.82	1.20													.01			2.15
Ukiah	do																																
Upland	do											.15			.18	.05																	0.38
Upper Lake	do											.43	.28	.05																			0.76

TABLE 2.—*Daily precipitation for October, 1910. District No. 11*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
California—Cont'd.																																	
Upper Matole	Coast			.44							T.	.15	.59					.03	.07											T.			1.28
Vacaville	Sacramento											.47	.17																				0.64
Valley Springs	San Joaquin											.30	.12																				0.42
Ventura	Coast																																
Visalia	San Joaquin														T.	.15																	0.15
Warner Springs	Coast											.03			.35	.41																	0.79
Wasco	San Joaquin											.25																					0.25
Watsonville	Coast										.08	.50	.13																				0.71
Weaverville	Sacramento																																
Weitchpec	Klamath			1.26							.01	.07	.11	.02				.21															1.68
West Branch	Sacramento			.03							.03	1.04	1.38	.04																			2.52
Westley	San Joaquin												.20																				0.20
West Point	do										1.16		.29	.16																			1.61
West Saticoy	Coast											.14			.54																		0.68
Wheatland	Sacramento			T.							.03	.37	.18	T.																T.			0.58
Willows	do										T.	.02	.10	.05																			0.17
Woodleaf	do											.96	1.10																				2.06
Yosemite	San Joaquin											1.30	.27																	T.	T.		1.47
Yuciapt	Coast																																

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 11, California.*

Date.	Lakeview, Oreg.		California.																									
			Alturas.		Barstow.		Branscomb.		Brawley.		Colusa.		Eureka.		Fresno.		Independence.		Los Angeles.		Mount Tamalpais.		Nevada City.		Porterville.		Red Bluff.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	.....	.....	74	40	96	58	71	39	97	68	.....	.....	60	50	90	59	80	54	77	58	72	49	81	45	94	63	79	59
2	.....	.....	68	23	92	60	68	37	95	61	.....	.....	62	45	79	51	76	50	76	57	68	50	79	39	93	52	81	59
3	.....	.....	64	33	92	55	60	37	98	57	.....	.....	60	47	85	54	82	44	77	57	62	47	76	39	93	50	74	52
4	.....	.....	59	26	97	55	70	32	98	60	.....	.....	62	44	76	56	80	51	75	58	64	46	75	39	88	52	73	46
5	.....	.....	76	30	.....	50	84	38	94	64	.....	.....	62	47	83	52	81	54	80	60	77	58	85	39	88	54	89	55
6	.....	.....	82	33	.....	50	87	40	101	61	.....	.....	61	51	95	58	82	47	91	60	82	68	90	43	97	54	90	58
7	.....	.....	83	33	.....	55	89	42	104	89	.....	.....	63	50	95	59	84	49	88	58	87	73	96	45	100	54	92	60
8	.....	.....	84	32	.....	55	80	43	105	85	.....	.....	66	48	98	63	86	49	90	63	85	65	96	46	102	55	91	60
9	.....	.....	78	39	.....	55	73	43	105	80	.....	.....	60	54	93	58	88	42	89	63	75	46	85	43	98	55	84	51
10	.....	.....	73	41	.....	53	55	47	97	70	.....	.....	56	52	77	57	83	64	78	58	50	41	65	45	88	55	69	58
11	.....	.....	57	32	.....	55	49	42	80	61	.....	.....	57	51	63	53	64	36	64	54	45	40	51	40	67	52	59	51
12	.....	.....	48	32	.....	45	50	41	79	51	.....	.....	53	50	80	48	60	34	65	49	45	40	50	37	66	44	56	49
13	.....	.....	56	31	73	43	57	40	79	54	.....	.....	55	48	62	50	46	39	66	52	56	42	67	30	60	49	70	48
14	.....	.....	60	25	70	40	61	41	68	52	.....	.....	60	45	70	47	65	36	66	53	67	52	71	30	73	43	77	53
15	.....	.....	71	29	80	50	64	41	72	53	.....	.....	62	46	75	54	52	42	67	51	60	45	71	39	74	53	74	56
16	.....	.....	66	31	85	42	64	42	78	50	.....	.....	60	51	75	52	60	36	67	51	55	44	73	39	88	54	71	48
17	.....	.....	57	41	85	41	67	44	88	55	.....	.....	62	54	73	48	70	38	71	51	60	46	73	39	78	46	73	54
18	.....	.....	65	28	85	49	76	45	92	53	.....	.....	57	50	74	51	72	49	80	57	74	54	90	36	80	54	82	57
19	.....	.....	69	31	85	51	85	47	87	59	.....	.....	66	45	84	53	70	41	86	57	72	59	83	38	82	54	83	62
20	.....	.....	71	27	85	54	84	49	88	58	.....	.....	54	48	84	54	69	37	86	64	75	64	80	38	90	51	81	51
21	.....	.....	73	25	82	30	80	41	86	48	.....	.....	53	49	83	56	69	38	85	63	71	62	78	40	88	53	79	53
22	.....	.....	69	26	90	49	76	40	87	45	.....	.....	57	49	83	54	72	44	79	57	66	56	79	39	86	55	79	52
23	.....	.....	74	22	90	44	71	38	90	44	.....	.....	52	44	78	51	76	47	74	56	73	62	83	36	92	49	85	52
24	.....	.....	76	23	90	42	74	39	97	52	.....	.....	58	43	83	52	76	47	96	65	75	65	88	36	87	48	90	56
25	.....	.....	73	23	87	42	76	39	90	55	.....	.....	58	49	86	56	77	38	82	63	72	61	86	39	90	49	85	52
26	.....	.....	68	26	89	43	80	41	87	57	.....	.....	59	48	85	51	79	42	79	57	72	66	86	38	88	48	86	64
27	.....	.....	71	22	89	44	85	46	95	57	.....	.....	51	45	85	52	77	48	73	57	70	63	86	37	89	49	86	60
28	.....	.....	76	22	85	40	86	45	91	58	.....	.....	49	42	87	53	73	45	73	57	76	64	83	37	90	48	82	52
29	.....	.....	76	22	85	53	79	42	87	55	.....	.....	53	46	82	55	71	42	63	60	67	43	82	39	84	51	80	50
30	.....	.....	75	24	83	49	70	40	84	61	.....	.....	57	46	70	51	72	47	71	57	56	45	69	37	85	48	69	46
31	.....	.....	71	27	86	48	72	39	88	58	.....	.....	54	44	74	46	75	40	74	55	67	50	77	35	76	45	75	45
Mns	.....	.....	69.8	29.0	86.1[b]	48.7	72.4	41.0	89.9	59.1	.....	.....	58.0	47.8	80.2	53.4	73.1	44.1	77.0	57.4	67.6	53.7	78.5	38.8	85.3	51.2	78.8	53.8

Date.	California.																									
	Redlands.		Sacramento.		San Diego.		San Francisco.		San Jose.		San Luis Obispo.		Santa Barbara.		Santa Rosa.		Sisson.		Stockton.		Summit.		Susanville.		Yosemite.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	86	61	82	55	74	63	62	51	71	48	72	50	70	57	80	47	73	39	78	56	75	43	70	44	79	39
2	82	47	80	53	69	59	68	52	76	42	80	49	70	51	81	40	72	44	74	49	74	30	64	32	80	39
3	81	52	77	55	70	57	64	52	71	44	81	55	77	50	75	45	66	28	77	50	66	34	70	42	78	38
4	82	53	75	49	67	60	67	50	74	49	80	56	68	55	79	39	59	31	80	48	71	35	69	31	79	36
5	97	52	85	55	69	61	79	55	84	45	90	66	72	55	89	47	70	38	77	53	69	31	70	34	79	37
6	98	57	88	57	75	60	84	58	90	50	89	54	80	53	93	46	82	38	84	53	82	41	77	36	84	40
7	101	62	92	59	73	57	89	60	91	54	92	49	81	54	96	49	81	39	89	56	90	41	79	40	85	42
8	101	64	93	61	77	61	82	54	90	51	93	50	82	51	92	42	80	40	90	57	82	43	80	44	89	43
9	99	61	86	55	75	57	71	51	81	48	91	48	85	50	80	44	70	48	86	55	74	41	81	43	87	41
10	89	56	67	53	72	56	60	53	61	50	63	52	70	55	68	50	70	46	80	53	78	45	71	39	85	40
11	65	51	58	51	66	58	57	51	60	50	63	47	64	52	60	45	71	47	74	53	68	50	58	39	45	30
12	66	44	59	50	66	55	56	50	57	50	62	45	64	43	56	48	62	28	72	50	50	28	59	34	45	33
13	67	43	70	46	66	50	63	52	66	46	63	46	65	51	70	41	78	29	70	44	46	25	54	28	50	34
14	64	45	80	49	65	55	77	60	78	44	75	52	73	47	82	46	69	27	68	42	52	28	57	28	59	36
15	60	43	72	51	62	54	68	54	70	46	69	48	68	50	75	47	74	39	70	48	58	33	62	31	65	34
16	64	47	68	49	66	55	60	51	71	46	66	42	65	46	65	54	60	32	71	47	67	38	65	40	69	34
17	76	46	72	47	66	58	66	51	72	52	79	50	75	48	77	44	63	33	76	46	68	34	64	43	70	35
18	89	51	83	52	66	55	80	52	83	55	82	63	85	57	91	48	64	34	83	52	58	30	58	32	75	32
19	85	53	84	51	81	54	82	66	85	48	82	54	87	52	89	55	70	31	77	48	65	32	60	32	78	29
20	85	51	81	51	78	53	80	56	84	48	87	50	85	55	85	41	71	35	77	50	85	35	64	30	72	33
21	85	51	78	53	76	59	59	51	74	47	80	48	79	50	78	44	65	29	74	49	73	31	65	34	70	34
22	82	51	76	46	70	52	61	51	66	45	69	50	75	48	70	43	66	30	80	47	80	31	65	35	68	35
23	91	47	81	53	68	58	66	52	79	40	86	46	78	49	80	36	68	36	76	47	75	32	63	32	73	32
24	93	54	80	50	87	54	81	52	81	41	95	52	91	49	88	37	68	32	80	48	85	39	65	32	78	32
25	98	56	82	51	81	57	81	57	84	42	89	48	77	55	89	39	64	32	80	48	71	31	68	31	75	33
26	79	49	82	50	70	60	68	52	80	45	69	42	71	51	82	42	73	32	81	48	75	36	63	34	74	33
27	90	48	83	51	66	58	71	49	77	47	70	49	65	57	80	46	73	33	81	51	74	30	58	28	73	31
28	89	49	82	51	68	63	69	47	77	43	82	45	69	56	82	38	66	37	81	52	71	33	60	27	73	33
29	67	58	75	51	68	61	57	48	66	49	60	51	62	60	66	44	67	34	80	52	73	33	60	31	67	32
30	71	56	65	50	70	58	57	52	60	54	63	55	69	52	58	44	68	33	72	50	69	31	65	32	70	33
31	81	46	69	44	68	54	66	51	69	47	79	52	71	48	73	49	74	41	74	43	70	29	67	35	69	35
Means	82.7	51.7	77.6	51.5	70.8	57.2	69.4	52.9	75.1	47.3	77.5	50.5	74.0	51.8	74.8	44.5	69.6	35.3	77.8	49.8	70.8	34.6	67.8	24.6	72.4	35.0

Climatological Data for October, 1910.

DISTRICT No. 12, COLUMBIA VALLEY.

EDWARD A. BEALS, District Editor.

GENERAL SUMMARY.

Although the rainfall averaged 0.60 inch above normal, and there were some days with high winds, the month on the whole was favorable over the district for nearly every kind of outdoor work. No serious interruption to transportation occurred on land and there were no disasters at sea. The unusually low stage in the Willamette River during the last half of the month prevented regular trips being made by the passenger and freight boats plying between Portland and Albany, and a large amount of coarse freight accumulated at the different landings waiting for the river to rise sufficiently for the boats to reach them. Construction work was delayed but little, and the soil was moistened by the early rains sufficiently to make fall plowing easier than usual. Under the influence of the prevailing mild temperatures fall grain made a good start, and late potatoes did better than expected. No killing frosts occurred in the Willamette Valley and the Sound Country, and no snow fell except high up in the mountains.

TEMPERATURE.

The mean temperature, as determined from the records of 223 stations, was 50.8°, which is 1.6° above the district average. The mean temperatures ranged between 41.8° at San Jacinto, Nev., and 59.9° at Toledo, Oreg. The warmest sections were along the coast and in the bottom lands of the valleys of the Columbia River system, where temperatures averaged 50° and above. The coolest sections were in the extreme eastern portion of this district, where the temperatures ranged below 45°, and reached 42° and below at several stations. In Idaho, excepting in the lower Payette Valley, the temperatures were generally below the normal.

October, 1910, was generally mild throughout, but the highest temperatures occurred quite uniformly during the first decade, while the last decade was cool, the lowest temperatures being recorded generally during the last five days of the month. No damage resulted from the freezing weather of the cool period, however, as vegetation was too far advanced to be injured. The highest recorded temperature was 94°, on the 10th, at Glenns Ferry, Idaho, and the lowest was 7°, on the 27th, at Chesterfield, Idaho.

PRECIPITATION.

The average precipitation, as determined from the records of 333 stations, was 2.65 inches, which is 0.60 inch above the normal for this district. Heavy rains fell in nearly all sections during the first four days of the month, and occasional rain occurred over most of the district until the 18th, following which, with the exception of local showers, the weather was generally fair.

The heaviest rainfall occurred in northwestern Washington, and also in a lesser degree in all elevated sections, more particularly over the northern portion of the district, while the least rainfall occurred in the central portion of the Columbia River Valley. The greatest monthly amount was 20.10 inches at Goat Lake, Wash., in the Puget Sound drainage area, and the least was a trace of precipitation at Kennewick, and Trinidad, Wash., and at Mikkalo, Oreg., all in the Columbia River drainage area. There was only a moderate snowfall, most of the precipitation, even at high altitudes, occurring as rain. The greatest 24-hour rainfall was 4.57 inches on the 3d, at Goat Lake, Wash., elevation 2,900 feet. Other heavy 24-hour falls, also on the 3d, were: 3.50 inches at South Bend, 3.42 inches at Lake Clealum, 3.35 inches at Detroit, all in Washington; 3.32 inches at Snowshoe, Mont., and 3.16 inches at Deadwood, Oreg.

THE RIVERS.

Owing to the heavy rains on the first few days of the month, the rivers showed a general rise and the mean stages were considerably higher than those for September. In most cases the lowest stages occurred on the 1st of the month.

The Columbia River averaged 0.5 foot below the normal for the month, being 1.8 foot below at Cascade Locks and 0.5 foot below at Vancouver. Compared with the September mean stage the average was 0.7 foot higher.

The Willamette River averaged 0.2 foot below the normal for October, being 0.3 foot below at both Albany and Salem. At Portland the mean stage, 2.9 feet, was 0.1 foot above normal, which stage was no doubt effected by tidewater as the tides were unusually high during the month, in some instances causing the water to flow up-stream for a short time.

The Snake River averaged 0.4 foot below the October normal, being 0.5 foot below at Weiser and 0.3 below at Lewiston. The highest gage reading reported from the Snake River stations was 3.0 feet at Weiser on the 31st and the lowest was 0.4 foot at Riparia on the 1st and 2d.

Government engineers have completed a survey of the upper Willamette from the Clackamas Rapids to the mouth of the Tualatin River. Maps are to be compiled and forwarded to Washington, D. C., in connection with the plan to construct new locks at Oregon City, on the east bank of the stream. Dredges are now at work on the Willamette and, if the weather permits, will soon have the channel cleared from Portland to Salem with a minimum depth of 3 feet at low water. Improvements have also been made in the channel of the Lewis River and the dredges are now ready to undertake the work of cutting through the sand bars in the Clatskanie River.

MISCELLANEOUS.

There was an unusual amount of cloudiness, especially west of the Cascade Mountains. The percentage of possible sunshine was 17 at Seattle, 27 at Portland, and 47 at Spokane.

The prevailing winds were from the southwest. There were several days with high winds at a number of places. The highest wind recorded was 76 miles from the southeast on the 2d at North Head, Wash. Seattle reported 38 miles from the south on the 24th, and Pocatello, Idaho, 36 miles from the southwest on the 4th.

Auroral displays were observed at Grants Pass, Oreg., on the 26th, and at Port Crescent, Wash., and Tatoosh Island, Wash., on the 27th. Thunderstorms were quite general over the district on the 1st, 3d, 14th, and 17th. Solar halos were observed at a number of stations on the 19th, 23d, 25th, 27th, and 28th, and lunar halos were recorded at a few places on the 27th and 28th. There was a great deal of fog during the month, especially near the coast.

TABLE 1.—*Climatological data for October, 1910. District No. 12, Columbia Valley.*

Stations.	Counties.	Elevation, feet.	Length of record, yrs	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Montana.																				
Anaconda	Deer Lodge	5,300	9	47.7	.....	81	10	17	27	43	1.31	+ 0.66	0.57	T.	....	19	7	5	.....	C. D. Demond.
Bison Mountain	Powell	7,240	1	.....	.....	.....	.....	.....	.....	.....	2.31	.....	0.72	11.0	8	11	15	5	.....	C. H. Anderson.
Butte	Silver Bow	5,716	15	48.4	+ 3.6	79	10	18	27	47	1.35	+ 0.54	0.45	6.0	5	13	7	11	sw.	J. R. Wharton.
Columbia Falls	Flathead	3,100	16	43.3[j]	− 0.2	71	15	15	27	41[j]	2.75	+ 1.50	.....	0.0	.....	.....	.....	.....	sw.	Mrs. I. M. Kennedy.
Como**§	Ravalli	.....	2	48.8	.....	82	9	22	27	36	2.04	.....	0.61	0.0	9	18	3	10	.....	Hiram Platt.
Dayton§§	Flathead	2,800	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Charles Frost.
East Anaconda§	Deer Lodge	5,500	5	48.4	.....	80	10	19	27	37	1.26	.....	0.50	T.	6	19	7	5	sw.	C. D. Demond.
Fortine	Lincoln	2,975	4	45.4	.....	75	8	15	26†	43	1.44	.....	0.60	....	8	12	5	14	nw.	Mike Petery.
Hamilton	Ravalli	3,575	7	49.6	.....	77	9	20	28	44	1.26	.....	0.56	0.0	4	18	10	3	s.	Bitter Root Valley Ir. Co.
Hat Creek	Powell	6,000	1	.....	.....	.....	.....	.....	.....	.....	2.74	.....	0.72	5.4	7	14	10	7	w.	M. K. Landreth.
Kalispell	Flathead	2,965	11	47.0	+ 4.5	73	9	19	27	40	1.29	+ 0.12	0.35	0.0	8	13	7	11	w.	U. S. Weather Bureau.
Lost Creek	Deer Lodge	5,200	.....	.....	.....	.....	.....	.....	.....	.....	0.95	.....	0.38	0.0	6	15	5	11	w.	Frank Henault.
McGinnis Meadows	Lincoln	.....	.....	44.8	.....	76	8†	10	27	48	2.63	.....	0.79	0.0	9	11	6	14	sw.	H. L. Beebe.
Missoula	Missoula	3,225	32	48.4	+ 3.4	81	9	20	28	44	1.20	+ 0.08	0.36	0.0	.....	.....	.....	.....	sw.	U. S. Weather Bureau.
Ophir	Powell	8,800	1	.....	.....	.....	.....	.....	.....	.....	2.29	.....	1.20	2.0	7	11	14	6	w.	E. S. Wilton.
Ovando	...do	4,207	10	41.9	.....	75	9	15	26†	43[a]	1.80	+ 0.78	0.50	....	8	3[a]	26[a]	1[a]	w.	S. B. Muchmore.
Philipsburg	Granite	5,275	7	48.0	.....	87	10	15	27	54[a]	0.95	.....	0.19	0.8	8	15[a]	7[a]	8[a]	sw.	G. T. Bramble.
Plains	Sanders	2,475	12	47.4	+ 0.8	80	10	20	27	45[a]	1.30	+ 0.49	0.80	0.0	4	11	0	20	sw.	M. H. Pierce.
Pleasant Valley	Flathead	3,500	3	46.5	.....	78	15	10	27†	54	2.43	.....	0.82	0.0	11	14	9	8	w.	A. D. Stillman.
Polson	...do	2,920	2	49.6	.....	73	6	24	28	30	1.60	.....	0.50	0.0	5	.....	.....	.....	.....	F. P. Brown.
St. Ignatius	Missoula	2,700	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
St. Regis	...do	2,650	2	47.7	.....	84	8	17	26	50	1.49	.....	0.51	0.0	5	2	23	6	ne.	R. D. Lee.
Saltese	...do	3,600	6	.....	.....	.....	.....	.....	.....	.....	5.36	.....	1.80	0.0	7	20	0	11	w.	E. K. Tarbox.
Snowshoe	Lincoln	4,500	4	42.8	.....	66	8	18	27	27	9.55	.....	3.32	4.0	10	13	1	17	w.	J. C. Riter.
Troy	...do	1,880	14	47.8	+ 1.5	78	9	14	28	46	4.62	+ 2.62	1.50	.....	11	12	7	12	w.	W. E. Milnor.
Upper Lake McDonald	Flathead	3,200	2	47.4[a]	.....	74	11†	19	28	37	4.57	.....	1.48	....	12	7[a]	5[a]	12[a]	s.	F. F. Liebig.
Willow Glen Stock Farm§	Deer Lodge	.....	1	46.8	.....	81[a]	9	14	25	47[a]	1.22	.....	0.47	T.	5	14	14	3	sw.	G. E. Luce.
Wyoming.																				
Afton	Uinta	6,200	6	43.8	+ 1.8	81	10	10	27	54	1.91	+ 0.43	0.57	....	6	23	2	6	.....	A. U. Call.
Alta	...do	7,000	1	42.6	.....	79	10	6	27	46	2.32	.....	0.70	.....	5	18	4	9	sw.	Mrs. Lucy Brown.
Bedford	...do	5,900	10	42.4	+ 0.6	82	10	12	27†	50	1.58	+ 0.04	0.54	0.0	4	20	3	8	w.	C. G. Heiner.
Snake River	Yellowstone Park	7,000	4	39.7	.....	72	8†	11	28†	49	1.10	.....	0.60	3.0	3	16	7	8	w.	U. S. Army.
Nevada.																				
San Jacinto	Elko	.....	5	41.8	.....	63	3†	18[b]	25	45	0.63	.....	0.32	0.0	3	25	3	3	sw.	Moses Jones.
Utah.																				
Standrod	Boxelder	.....	6	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. B. Jones.
Idaho.																				
Albion	Cassia	.....	9	49.0	.....	87	8	15	27†	55	1.15	.....	0.42	0.0	6	19	6	6	w.	G. A. Axline.
Almo	...do	.....	3	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. L. Eames.
American Falls	Oneida	4,341	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. H. Barber.
Blackfoot	Bingham	4,503	15	48.2	+ 2.1	88	10	11	28	58	0.49	− 0.53	0.18	0.0	6	15	16	0	sw.	E. A. Dowd.
Blackfoot Dam	...do	.....	2	44.2	.....	80	10	14	28	48	1.58	.....	0.63	0.0	5	19	7	5	sw.	N. W. Irsfield.
Bock's Ranch	Elmore	3,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	William Bock.
Bogus Creek	Boise	4,200	.....	.....	.....	.....	.....	.....	.....	.....	2.12	.....	0.93	0.0	7	19	10	2	.....	F. P. Ingraham.
Boise	Ada	2,739	25	53.5	+ 3.2	88	8	31	27	41	0.99	− 0.29	0.43	0.0	6	14	12	5	n.	U. S. Weather Bureau.
Bonners Ferry	Bonner	1,850	....	47.6	.....	74	8	19	27†	36	3.09	.....	1.30	0.0	8	9	14	8	sw.	W. H. Heideman.
Boulder Mine	Boise	4,800	2	.....	.....	.....	.....	.....	.....	.....	2.59	.....	0.98	0.0	8	24	3	4	.....	Patrick Moriarty.
Buhl	Cassia	3,800	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. J. Idema.
Burke	Shoshone	4,082	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. Alvin Hall.
Caldwell	Canyon	2,372	6	50.8	.....	87	9	19	29	45	0.40	.....	0.25	0.0	5	19	9	3	w.	Prof. Wm. J. Boone.
Camas	Fremont	4,815	2	49.8[a]	.....	85	10	13	27	53[a]	.....	.....	.....	.....	.....	.....	.....	.....	sw.	Mrs. Edna Faulkner.
Cambridge	Washington	2,651	14	.....	.....	87	11	.....	.....	.....	0.07	.....	0.05	0.0	2	15	3	13	s.	Chas. H. Shepherd.
Cedar Creek Dam	Twin Falls	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. R. Collins.
Chesterfield	Bannock	5,424	15	44.3	+ 3.4	85	10	7	27	64	0.83	− 0.05	0.34	0.0	6	14	9	8	.....	Chas. S. West.
Coeur d'Alene	Kootenai	2,157	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Jos. T. Scott.
Cottonwood Creek	Boise	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Hedrick.
Crawford	...do	4,300	....	45.4	.....	80	8†	11	27	58	0.45	.....	0.22	0.0	4	17	4	10	sw.	Mrs. Gertrude Kerby.
Culdesac	Nez Perce	1,520	3	53.2	.....	84	8†	28	30	41	1.87	.....	0.94	0.0	4	18	5	8	.....	R. R. Richmond.
Deary	Latah	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	H. M. Call.
Dent	Nez Perce	1,350	6	53.6	.....	81	9†	28	27†	39	3.69	.....	1.46	0.0	6	14	8	9	.....	Emil Schuessler.
Driggs	Fremont	6,097	3	43.0	.....	78	10	13	27	42	2.13	.....	0.89	0.2	4	15	4	12	sw.	Walter H. Durrant.
Edie	...do	.....	2	42.6	.....	72	10	13	29	39	0.85	.....	0.70	0.0	2	24	3	4	s.	Geo. B. Edie.
Edwardsburg	Idaho	4,500	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. A. Edwards.
Emmett	Canyon	2,350	4	51.6	.....	88	9	19	29	51	0.79	.....	0.50	0.0	5	24	1	6	.....	C. P. Kar.
Flowers	Blaine	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Forney	Lemhi	.....	13	45.0	+ 2.1	84	11	12	27	48	1.20	+ 0.11	0.60	2.5	4	13	9	9	sw.	M. B. Merritt.
Garden Valley	Boise	3,600	4	.....	.....	.....	.....	.....	.....	.....	2.35	.....	1.55	0.0	3	18	9	4	.....	Mrs. Gertrude M. Ross.
Garnet	Elmore	2,575	11	56.9[b]	+ 1.2	85[a]	2	25	28	51[a]	0.90	+ 0.13	0.25	0.0	4	25	0	6	w.	Asa A. Kenison.
Glenns Ferry	...do	2,569	3	52.9	.....	94	10	16	28	57	0.31	.....	0.11	0.0	4	24	2	5	nw.	I. E. Perkins.
Gooding	Lincoln	3,572	2	51.8	.....	91	10	.....	....	44[a]	0.45	.....	0.26	0.0	5	18	8	5	w.	John Krall, jr.
Grand Forks	Shoshone	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Henry Kottkey.
Grandview	Owyhee	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	N. G. Massey.
Grimes Pass	Boise	5,200	2	.....	.....	.....	.....	.....	.....	.....	2.62	.....	1.53	0.0	8	.....	.....	.....	.....	Joseph M. Clarke.
Guffey	Owyhee	2,381	2	55.2	.....	90	8†	24	29	46	0.61	.....	0 22	0.0	7	24	6	1	e.	Fred Perry.
Hailey	Blaine	5,347	7	48.1	.....	77	8†	22	27	40[a]	1.18	.....	0.63	0.0	4	24	3	4	sw.	U. S. Forest Service.
Hotspring	Owyhee	2,752	5	53.4	.....	90	11	22	28	50	0.58	.....	0.23	0.0	4	21	7	3	.....	J. M. Waterhouse.
Idaho City	Boise	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Emma L. Hammer.
Idaho Falls	Bingham	4,742	16	.....	.....	85	8†	20	26	62	1.15	+ 0.14	0.52	0.0	5	13	9	9	ne.	Dr. T. M. Bridges.
Indian Valley	Washington	2,999	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. E. Henke.
Irwin	Bingham	6,500	2	48.2	.....	86	10	14	28	51	1.37	.....	0.68	T.	4	17	4	10	se.	Eva Johnston.
Kellog	Shoshone	2,305	....	48.4	.....	79	8	20	27	38	3.97	.....	0.93	0.0	10	13	1	17	sw.	W. McM. Huff.
Kirkham	Boise	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Josie B. West.
Kooskia	Idaho	1,261	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Lakeview	Bonner	2,250	14	48.2	+ 1.5	70	9	26	28	31	4.15	+ 1.79	1.58	0.0	7	13	4	14	sw.	E. D. Faust.
Landore	Washington	5,300	....	45.4	.....	77	11	20	27	36	3.55	.....	1.58	0.2	8	18	6	7	.....	Mrs. Emma L. Brown.
Lewiston	Nez Perce	757	17	54.7	+ 2.9	80	6	26	27	34	1.06	− 0.14	0.40	0.0	6	12	3	16	e.	U. S. Weather Bureau.
Little Camas	Elmore	5,000	2	.....	.....	.....	.....	.....	.....	.....	1.57	.....	0.87	0.0	5	19	8	4	w.	Solon McCoy.
Long Gulch	...do	4,500	2	.....	.....	.....	.....	.....	.....	.....	1.46	.....	0.85	0.0	5	22	6	3	.....	Mrs. Elizabeth A. Hjort.
Loon Creek	Custer	6,000	.....	.....	.....	.....	.....	13	27	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Forest Service.
Lost River	Blaine	5,700	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Mary L. Lemon.
Lowry	Owyhee	.....	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	W. D. Winter.
McCall	Boise	5,025	5	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Will Newman.
Mackay‖‖	Custer	5,897	3	46.4	.....	74	10	16	27	40	0.78	.....	0.41	0.0	4	25	6	0	nw.	U. S. Forest Service.
Meadows	Washington	3,950	8	46.0	.....	84	11	16	27†	53	1.93	.....	0.90	0.0	9	11	16	4	.....	Chas. A. Hackney.
Mesa	...do	3,275	....	.....	.....	.....	.....	21	28	.....	.....	.....	.....	0.0	.....	.....	.....	.....	.....	Elias Nelson.
Middle Fork	Idaho	1,250	....	54.4	.....	85	6	27	27	40	2.17	.....	0.92	0.0	9	19	4	8	.....	Joseph McGhee.
Milner	Cassia	4,200	7	51.6	.....	88	9†	25	27†	46[b]	0.86	.....	0.41	0.0	4	.....	.....	.....	nw.	J. H. Henry.

TABLE 1.—*Climatological data for October, 1910. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Idaho—Cont'd.																				
Moscow	Latah	2,748	18	49.4	+ 0.6	77	10	20	26	39	2.21	- 0.55	1.19	0.0	5	9	13	9	se.	University of Idaho.
Mountainhome	Elmore	3,150	5	50.8	.....	89	10	18	28	54	1.06	.....	0.45	0.0	4	20	5	6	.....	Mrs. Ellen Manion.
Murtaugh‖	Cassia	.....	4	48.9	.....	88a	10	18	27	50a	0.48	.....	0.30	0.0	2	21	10	0	w.	J. E. Steinour.
Nez Perce‖	Nez Perce	3,182	2	48.8	.....	76	6†	22	27	43	1.67	.....	0.50	0.0	8	19	0	12	.....	P. Mitchell.
Oakley	Cassia	4,700	18	53.5	+ 3.8	90	10	20	19†	50	0.40	- 0.42	0.25	0.0	2	15	15	1	s.	John Adams.
O'Hara Bar	Idaho	1,400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. D. Agnew.
Orofino	Nez Perce	1,027	6	52.4	.....	84	1	22	27	45	3.02	.....	0.92	0.0	7	16	10	5	.....	Geo. Alteneder.
Payette	Canyon	2,159	20	49.4	- 2.1	85	9†	17	28	48	0.81	- 0.06	0.27	0.0	7	17	9	5	n.	E. F. Allen.
Peaceful Valley	do	2,380	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. W. Newton.
Pebble	Bannock	5,277	2	45.3	.....	83	10	11	28	52	1.16	.....	0.55	0.0	5	16	11	4	sw.	Mrs. Fannie Say.
Pierson	Custer	6,900	.....	39.9	.....	71	10	10	28†	51	1.36	.....	0.73	0.0	4	22	3	6	s.	David P. Clarke.
Pine	Elmore	4,100	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Jennie Potter.
Placerville	Boise	4,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	James McDevitt.
Pleasant Valley	Ada	3,000	3	51.7	.....	89	8	23	27	44	1.01	.....	0.33	0.0	5	23	1	7	se.	C. E. Friedrich.
Pocatello	Bannock	4,483	11	51.2	+ 3.2	86	10	19	28	47	1.17	+ 0.19	0.36	0.0	10	18	10	3	se.	U. S. Weather Bureau.
Pocatello Nursery	do	5,396	3	46.7	.....	82	10	9	27	50	1.39	.....	0.80	0.0	4	26	2	3	sw.	Mrs. Anna M. Wrensted.
Poplar	Bingham	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Stanley Bybee.
Porthill	Bonner	1,665	22	48.4	+ 3.0	72	1†	21	28	30	2.50	+ 0.62	1.02	0.0	10	13	7	11	.....	H. A. French.
Powers Ranch	Boise	4,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Mrs. Mary French.
Pyle Creek	do	3,100	2	.....	.....	.....	.....	.....	.....	.....	2.76	.....	1.48	0.0	7	18	9	4	.....	Walter L. Cole.
Rattlesnake Creek	Elmore	4,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Richard M. Green.
Richfield	Lincoln	.....	.....	49.9	.....	88	10	21	27†	48	0.44	.....	0.15	0.0	4	21	9	1	w.	C. H. Fitch.
Roseworth	Twin Falls	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.65	.....	0.33	T.	5	8	18	5	sw.	D. B. Hartwell.
Ruby Creek	Boise	4,400	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	O. A. Hatter.
Rupert	Lincoln	4,204	4	50.2	.....	87	8†	19	27	53	0.40	.....	0.14	0.0	6	25	2	4	w.	Will Parry.
St. Maries	Kootenai	2,263	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. S. Turnbull.
Salmon	Lemhi	4,040	5	46.9	.....	86	8	13	28†	58	0.41	.....	0.25	0.0	3	24	4	3	w.	E. K. Abbott.
Salmon River Dam	Twin Falls	.....	3	51.6	.....	85	8†	22	27	40	0.90	.....	0.45	0.0	6	20	6	5	n.	Arch M. Gilbert.
Sandpoint	Bonner	2,086	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	E. H. Edgertond.
Sheep Hill	Boise	5,000	2	.....	.....	.....	.....	.....	.....	.....	2.27	.....	1.42	0.0	8	.....	.....	.....	.....	Clifford M. Garner.
Shoshone	Lincoln	3,968	3	50.2	.....	90	9	23	27	45	0.59	.....	0.27	0.0	4	.....	.....	.....	w.	O. A. Truman.
Silver City	Owyhee	6,280	3	.....	.....	.....	.....	.....	.....	.....	1.53	.....	0.40	0.0	7	22	4	5	s.	A. D. Bradfield
Smith Prairie	Elmore	5,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Wm. W. Newell.
Smith Ranger Station	Bonner	1,080	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	T. D. Crittenden.
Soldier Creek	Blaine	.....	.....	47.2	.....	87	10	19	27	47	0.97	.....	0.87	0.2	2	19	8	4	w.	J. E. Minear.
Springfield	Bingham	4,420	2	48.2	.....	87	10	11	28	54	0.12	.....	0.12	0.0	1	19	8	4	sw.	Mrs. W. A. Edwards.
Sugar‖	Fremont	.....	4	44.8	.....	82	10	15	27	49	0.93	.....	0.40	0.0	7	15	10	6	sw.	Arthur Cutting.
Sunnyside	Elmore	.....	2	51.1	.....	87	8†	19	28	47	0.63	.....	0.23	0.0	7	.....	.....	.....	nw.	E. A. Wilmot.
Tripod Mountain	Boise	4,300	2	.....	.....	.....	.....	.....	.....	.....	1.59	.....	0.37	0.0	7	18	7	6	.....	Mrs. Verna Paddock.
Twin Falls	Twin Falls	3,825	6	51.2a	.....	91a	10	17	28	53a	0.48	.....	0.30	0.0	3	21	10	0	w.	J. A. Waters.
Vernon	Fremont	.....	13	46.4	+ 2.8	82	10	19	27†	52	2.49	+ 1.51	0.90	T.	6	18	9	4	sw.	A. M. Slatery.
Wallace	Shoshone	2,728	3	47.8	.....	77	8	23	27	34	6.53	.....	2.91	.....	10	.....	.....	.....	w.	U. S. Weather Bureau.
Wendell	Lincoln	3,400	3	52.9	.....	92	10	24	27†	49	0.59	.....	0.30	0.0	4	22	9	0	w.	Chas. L. Dingler.
Washington.																				
Aberdeen	Chehalis	162	19	52.2	- 0.2	70	13	30	26	28	10.08	+ 3.37	2.70	0.0	16	0	20	11	w.	Carl S. Weatherwax.
Anacortes	Skagit	60	16	51.4	.....	76	18	31	26†	26	3.99	+ 1.51	1.08	0.0	13	10	13	8	.....	Douglas Allmond.
Baker	do	200	4	51.3	.....	72	15	30	27	30	11.70	.....	2.28	0.0	15	11	2	18	.....	Robt. M. White.
Bellingham	Whatcom	60	15	52.0	+ 1.1	68	8†	30	28	37	4.94	+ 2.50	0.92	0.0	12	5	13	13	.....	Sanford B. Mayhew.
Blaine	do	57	13	50.2	+ 2.3	67	17	30	26†	31	6.75	+ 3.39	1.05	0.0	19	5	12	14	se.	U. S. Weather Bureau.
Blalock Island	Benton	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Blalock Island Garden Co.
Blewett	Chelan	2,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John Beermeister.
Bremerton	Kitsap	30	.....	.....	.....	.....	.....	.....	.....	.....	5.96	.....	1.84	0.0	15	.....	.....	.....	.....	U. S. Navy Yard.
Brewster	Okanogan	1,620	.....	50.9	.....	77	8	25	27	29	0.45	.....	0.28	0.0	3	14	15	2	sw.	Mrs. H. F. Bertram.
Bumping Lake	Yakima	.....	.....	45.2	.....	72	11	19	25	38	5.59	.....	2.30	0.0	9	12	9	10	.....	U. S. Reclamation Service.
Cashmere	Chelan	.....	.....	.....	.....	.....	.....	.....	.....	.....	1.53	.....	0.85	0.0	6	13	16	2	nw.	Valley Power Co.
Cedar River	King	535	3	.....	.....	.....	.....	.....	.....	.....	8.42	.....	1.60	0.0	17	8	3	20	.....	George Landsburg.
Centralia	Lewis	212	17	52.4	+ 0.3	70	15†	27	27	42	5.35	+ 1.89	1.49	0.0	15	7	9	15	s.	I. S. Turner.
Cheney	Spokane	2,351	11	49.2	.....	73	8	28	26†	32	1.54	- 0.07	1.00	0.0	6	15	1	15	w.	Northern Pacific Ry.
Clealum	Kittitas	1,930	11	48.4	+ 1.3	76	11	17	28	38	2.17	+ 0.29	0.96	0.0	7	12	11	8	nw.	J. A. Balmer.
Clearbrook	Whatcom	140	7	49.0	.....	65	11†	26	26	34	8.70	.....	1.66	0.0	17	3	17	11	s.	Geo. Gibbs.
Clearwater	Jefferson	135	14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Colfax	Whitman	2,300	21	50.6a	+ 1.0	83	10	21	27	50a	2.20	+ 0.08	.....	0.0	.....	.....	.....	.....	.....	W. H. James.
Colville	Stevens	1,635	10	48.4	+ 3.2	78	8	11	28	45	0.86	- 0.32	0.42	0.0	5	12	4	15	sw.	W. L. Sax.
Conconully	Okanogan	2,300	10	47.8	+ 0.6	76	8	19	27	33	0.77	- 0.28	0.28	0.0	5	13	8	10	.....	Wm. Baines.
Cowiche	Yakima	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	U. S. Reclamation Service.
Crescent	Lincoln	2,250	10	48.0	+ 0.9	74	9	18	27	34	1.37	+ 0.02	0.98	0.0	4	17	10	4	sw.	Otto Wollweber.
Davenport	do	2,450	1	48.6	.....	75	8	23	27	31	1.12	.....	0.44	0.0	5	20	7	4	sw.	W. H. Reed.
Dayton	Columbia	1,700	24	56.8	+ 6.7	82	8	23	27	41	1.97	- 0.04	1.11	0.0	5	12	11	8	sw.	W. W. Hendron.
Detroit	Mason	30	2	52.2	.....	68	15	31	28	28	8.91	.....	3.35	0.0	18	8	4	19	s.	Walter O. Eckert.
Dixie	Walla Walla	5,000	1	.....	.....	.....	.....	.....	.....	.....	4.58	.....	1.73	T.	8	12	6	13	sw.	T. Z. Andrews.
Duckabush	Jefferson	380	2	53.0a	.....	75a	19	30a	28	34	6.00	.....	1.55	0.0	14	5a	9a	16	sw.	E. J. Finch.
East Sound	San Juan	500	15	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Benj. E. Harrison.
Ellensburg	Kittitas	1,571	22	49.8	+ 2.5	80	8	14	27†	44	0.16	- 0.37	0.06	0.0	3	14	8	9	nw.	R. Lee Barnes.
Ephrata	Grant	1,265	7	50.1	.....	89	15	20	25	42	.....	.....	.....	.....	.....	20a	10a	0a	s.	T. J. Cook.
Forks	Clallam	480	1	.....	.....	.....	.....	.....	.....	.....	15.49	.....	2.36	0.0	14	15	0	16	s.	E. A. Markham.
Fort Simcoe	Yakima	1,427	16	51.6	- 0.9	79	8	22	26	36a	1.24	+ 0.51	0.45	0.0	4	20a	5a	5a	w.	Frank C. Hill.
Goat Lake	Snohomish	2,900	1	.....	.....	.....	.....	.....	.....	.....	20.10	.....	4.57	0.0	21	.....	.....	.....	.....	C. M. Mackintosh.
Gold Creek	Yakima	2,600	1	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	John W. Anderson.
Gold Hill	do	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Goldendale	Klickitat	1,600	4	53.2	.....	76	11	24	27†	38	0.58	- 0.65	0.38	0.0	2	8	20	3	w.	Klickitat Co. Abstract Co.
Granite Falls	Snohomish	397	7	.....	.....	.....	.....	.....	.....	.....	8.08	.....	1.96	0.0	17	4	5	22	nw.	C. H. Cleaver.
Guler	Klickitat	2,200	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Frank Kuehnel.
Hatton	Adams	1,100	5	52.6	.....	83	8	18	28	42	0.48	.....	0.19	0.0	3	7	9	15	sw.	Dr. A. V. Marion.
Huntsville	Columbia	1,400	2	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Dr. B. Hill.
Irene Mountain	Okanogan	3,015	1	.....	.....	.....	.....	.....	.....	.....	0.43	.....	0.16	0.0	4	8	7	16	sw.	Mrs. Manda Shain.
Kachess Valley	Kittitas	3,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Kennewick	Benton	367	15	58.2	+ 4.6	88	8	20	28	50	T.	- 0.57	T.	0.0	0	.....	.....	.....	.....	Mrs. I. W. Soth.
Kettle Falls	Stevens	1,265	1	49.8	.....	79	8	18	27	38	1.05	.....	0.48	0.0	4	9	14	8	.....	Harry H. Cole.
Kiona	Benton	430	5	53.8	.....	85	8	19	27	39	0.35	.....	0.16	0.0	5	14	10	7	sw.	Dr. F. S. Hedger.
Kosmos	Lewis	775	4	51.9	.....	75	15	28	26	35	4.46	.....	1.08	0.0	12	3	13	15	n.	J. A. Ulsh.
La Center	Clarke	230	13	51.0	- 0.3	72	15	27	26	33	3.64	- 0.61	1.00	0.0	8	8	13	10	sw.	Joseph Brothers.
La Crosse	Whitman	1,400	1	52.6	.....	84	6	16	26	42	1.31	.....	0.85	0.0	4	17	2	12	sw.	M. E. Schreck.
Lake Clealum	Kittitas	2,171	1	.....	.....	.....	.....	.....	.....	.....	5.59	.....	3.42	0.0	10	7	3	21	nw.	U. S. Reclamation Service.
Lake Kachess	do	2,235	2	47.5	.....	68	15	24	27†	34	8.05	.....	2.83	0.0	11	10	5	16	e.	Do.
Lake Keechelus	do	2,479	2	.....	.....	.....	.....	.....	.....	.....	8.73	.....	2.30	0.0	12	2	3	26	.....	Do.
Lakeside	Chelan	1,116	19	52.8	+ 1.8	73	6	27	27	27	0.61	- 0.11	0.52	0.0	5	6	17	8	e.	W. H. Van Meter.
Laurel	Klickitat	1,900	1	.....	.....	.....	.....	.....	.....	.....	3.23	.....	1.43	0.0	7	7	20	4	w.	Mrs. Minnie E. Strout.

TABLE 1.—*Climatological data for October, 1910. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.							Precipitation, in inches.				Sky.				Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.	Number of rainy days, .01 inch or more.	Number of clear days.	Number of partly cloudy days.	Number of cloudy days.		
Washington—Cont'd.																				
Laurier	Ferry			45.2[j]		75	17	16	27	40	1.03		0.26	0.0	7[j]	5[j]	5[j]	11	sw.	Mrs. J. S. Myers.
Lester	King	1,614	6	50.4		74	15	21	26	34	8.08		2.70	T.	13	11	3	17	e.	W. W. Clabaugh.
Lone Tree	Chehalis	14	1	53.0		62	15†	41	26	13	11.37		2.88	0.0	19	1	12	18	nw.	U. S. A. Engineer Corps.
Longmires Springs	Pierce	2,800	1								4.85		0.82	0.0	17	9	8	14		U. S. Forest Service.
Lost Creek	Okanogan	3,125	1								0.59		0.18	0.0	5	10	12	9	sw.	P. H. Leese.
Lucerne	Chelan	1,100	3																	Mrs. Barbara Shearer.
Lyle	Klickitat	600	17																	Wm. Morginson.
McCumber's Ranch	Yakima	2,182	1								3.70		1.90	0.0	6	8	15	8	sw.	Mrs. Mary McCumber.
Merritt	Chelan	2,175	3																	H. B. Smith.
Mottinger	Benton	357	10	59.0	+ 2.6	88	8	26	27†	38	0.30	− 0.39	0.17	0.0	2	26	4	1	w.	G. H. Mottinger.
Mount Pleasant	Skamania	650	10	50.2	− 4.1	75	8	34	26	23	4.95	+ 0.63	1.15	0.0	16	8	11	12	w.	F. M. Grout.
Moxee	Yakima	1,000	18	52.5[e]	+ 2.4	81	8	16	27†	45[d]	0.12	− 0.40	0.04	0.0	4	9	16	6		Henry B. Scudder.
Newport	Stevens	2,400	....	47.7		76	8	18	27	37	2.53	+ 0.72	1.01	0.0	9	8	13	10	sw.	Chas. M. Talmadge.
Nighthawk	Okanogan	3,050	....																	Steve Nagy.
North Head	Pacific	211	8	52.6	− 0.3	68	19	41	26	19	4.05	+ 0.14	1.07	0.0	19	3	8	20	sc.	U. S. Weather Bureau.
Northport	Stevens	1,350	11	48.5[e]		68[j]	15	22[d]	27†	33[j]	1.46		0.80	0.0	4	10[e]	14[e]	4[e]		Forrest B. Phillips.
North Yakima	Yakima	1,070	1	53.6		80	8	23	28	43	0.12		0.05	0.0	4	17	6	8	s.	U. S. Weather Bureau.
Nutland	Klickitat		1	51.0		72	8	25	27†	29	0.22		0.15	0.0	3					J. R. Shepard.
Odessa	Lincoln	1,540	7	51.2		82	9	19	27	40	0.64		0.35	0.0	4	10	15	6	sw.	Wm. U. Neeley.
Olga	San Juan	50	20	50.2	+ 0.2	62	15	35	27†	21	4.96	+ 2.36	1.02	0.0	10	7	9	15	se.	Cecil S. Willis.
Olympia	Thurston	200	32	52.4	+ 1.6	69	28	28	28	41	8.07	+ 3.79	2.77	0.0	18	8	4	19	sw.	M. O'Connor.
Omak	Okanogan	850	1																	Wm. G. Tait.
Oroville	....do	922	1																	A. M. Dufield.
Peola	Garfield	5,000	1								3.03		1.80	0.0	6	22	4	5	nw.	Samuel Gruell, sr.
Pomeroy	....do	1,500	18	54.2	+ 0.6	81	7	26	26†	40	1.20	− 0.12	0.60	0.0	4	12	9	10	w.	Peter McClung.
Port Crescent	Clallam	259	15	47.8	+ 0.4	64	6	29	28	22	4.88	+ 1.41	1.48	0.0	18	0	16	15	s.	U. S. Weather Bureau.
Port Townsend	Jefferson	80	20	51.2	+ 0.7	64	16	35	27†	20	1.89	+ 0.25	0.50	0.0	10	6	2	23	sw.	Frank Plummer.
Pullman	Whitman	2,550	18	51.3	+ 1.7	79	8†	26[a]	27	36[a]	2.43	+ 1.01	0.75	0.0	7	18	5	8	sw.	State Agricultural College.
Quiniault	Chehalis	300	3																	A. V. Higley.
Republic	Ferry	2,628	10	45.0	+ 1.1	71	15	12	27	38	1.01		0.65	0.0	5	14	4	13	n.	Geo. B. Stocking.
Rex Creek	Chelan	1,135	3																	James W. Nicol.
Ritzville	Adams	1,825	11								0.81	+ 0.14	0.26	0.0	5					Northern Pacific Ry.
Rock Lake	Whitman	1,910	4	49.0[e]		76	8	22	27	35[e]	1.36		0.71	0.0	3	16	1	14	w.	P. M. Ramsey.
Rosalia	....do	2,425	18	49.6	+ 1.6	79	9	25	27	33	2.40	+ 0.83	1.10	0.0	8	12	6	13	sw.	Hans Mumm.
Russells Ranch	Yakima	2,870	1								2.48		0.80	0.0	8	15	4	12	w.	Maggie M. Russell.
Scenic Hot Springs	King	2,021	....																	
Seattle	....do	123	19	52.8	+ 2.0	66	28	36	26	28	4.02	+ 1.14	1.09	0.0	19	2	6	23	s.	U. S. Weather Bureau.
Sedro-Wooley	Skagit	38	13	51.5	− 0.1	72	15	29	28	29	8.43	+ 4.14	2.00	0.0	14	5	9	17		Mrs. H. L. Devin.
Sixprong	Klickitat	1,240	3	56.2		83	8	26	27	34	0.11		0.08	0.0	3	16	4	11	sw.	C. E. Comstock.
Skagit Power Dam	Whatcom																			Skagit Power Co.
Snohomish	Snohomish	100	16	51.8	+ 0.4	70	15†	27	27	39	5.03	+ 1.39	1.40	0.0	18	6	4	21	nw.	Warren Hodge.
Snoqualmie Falls	King	667	11	51.2	+ 0.5	69	15	29	26	28	8.99	+ 3.98	1.88	0.0	20	13	0	18		O. N. Wiswell.
Snoqualmie Pass	Kittitas	3,000	....																	C. E. Ingraham.
Snyders Ranch	Okanogan	2,200	1								1.55		0.82	0.0	5	12	17	2	e.	Geo. M. Snyder.
South Bend	Pacific	16	15	52.8	− 1.5	72	15	31	27	33	11.98	+ 6.03	3.50	0.0	21	7	8	16	w.	Miss Winifred Eichner.
Spokane	Spokane	1,943	29	50.8	+ 3.5	77	8	23	27	30	1.42	− 0.09	0.62	0.0	6	6	7	18	sw.	U. S. Weather Bureau.
State University	King		1	50.4		66	15	32	26	26	4.67		0.96	0.0	19	5	5	21	s.	University of Washington.
Stokes Ranch	Okanogan	2,670	1								1.45		1.04	0.0	4	12	17	2	w.	Chas. W. Gunn.
Sullivan Lake	Stevens	2,700	....								2.03		0.65	0.0	10	10	9	12		U. S. Forest Service.
Sumner	Pierce	77	2	51.1		67	14	25	27†	38	5.98		1.31	0.0	19	6	1	24	n.	H. E. Thompson.
Sunnyside	Yakima	740	15	53.4	+ 2.6	85	8	18	27	40	0.16	− 0.37	0.12	0.0	2	16	9	6	sw.	U. S. Reclamation Service.
Tacoma	Pierce	213	24	52.6	+ 2.0	66	19	31	26	27	5.22	+ 1.82	1.93	0.0	19	6	5	20	sw.	U. S. Weather Bureau.
Tatoosh Island	Clallam	86	25	51.2	+ 0.3	60	15	43	26	12	8.82	+ 1.17	1.77	0.0	23	5	7	19	nc.	Do.
Tieton	Yakima	2,000	1	48.3		70	8	20	27	29	2.26		0.88	0.0	6	8	16	7	w.	U. S. Reclamation Service.
Touchet	Walla Walla	556	3	54.0		83	8	15	27	44	0.41		0.25	0.0	4	16	6	9	sw.	D. W. Dorrance.
Touchet Ridge	Columbia	2,500	1								4.95		2.00	0.0	5	11	10	10	sw.	R. H. King.
Trinidad	Grant	900	6	55.7		83	8	28	27†	32	T.		T.	0.0	0	24	6	1	nw.	J. C. Wheeler.
Twin Sister Lakes	Yakima	4,500	....																	
Twisp	Okanogan	1,350	7																	
Tyee	Chelan	2,000	1																	Elias McCrea.
Upper Clealum Valley	Kittitas	5,300	....																	
Vancouver	Clarke	100	35	54.6	+ 1.4	79	8	30	26	33	3.42	+ 0.75	1.46	0.0	9	5	12	14	nw.	A. A. Quarnberg.
Vashon Island	King	40	21	51.6	+ 0.9	64	1†	34	26†	22	6.17	+ 3.32	1.07	0.0	20	7	2	22	s.	Miss Gertrude McClintock.
Wahluke	Grant	410	6	56.2		85	8	27	28	34	0.51		0.36	0.0	3	17	8	6		F. C. Koppen.
Wallace	Okanagon	4,000	1								1.03		0.53	0.0	7	6	18	7	s.	G. A. Wallace.
Walla Walla	Walla Walla	1,000	26	56.0	+ 2.3	80	8	27	27	29	1.39	− 0.08	0.58	0.0	7	13	9	9	s.	U. S. Weather Bureau.
Waterville	Douglas	2,624	20	48.0	+ 2.1	80	8	12	27	41	0.37	− 0.34	0.14	0.0	4	16	12	3	w.	O. R. Hopewell.
Wenatchee (near)	Chelan	1,169	11	50.9	+ 1.0	72	8	27	27	27	0.48	− 0.33	0.32	0.0	3	9	14	8	w.	Geo. A. Pitcher.
West Branch	Stevens	2,600	....																	U. S. Forest Service.
Wilbur	Lincoln	2,203	11	48.0	− 0.1	74	11	18	27	35	1.12	− 0.13	0.62	0.0	3	11	5	15	s.	Rollin J. Reeves.
Yale	Cowlitz	375	3																	L. F. Williams.
Zindel	Asotin	715	8	58.8		87	10†	29	27	44	2.11		0.59	0.0	5	17	8	6	n.	M. W. Zindel.
Oregon.																				
Albany	Linn	214	28	54.6	+ 2.2	76	7	30	28	33	2.64	− 0.52	1.14	0.0	12				s.	F. M. French.
Ashland	Jackson	1,963	22	55.2	+ 1.3	89	8	36	12†	42	1.19	− 0.25	0.70	0.0	3	18	10	3	nw.	G. G. Eubanks.
Astoria	Clatsop	78	48	54.8	+ 1.6	74	19	43	13	22	8.97	+ 3.35	2.89	0.0	19	6	7	18	sw.	Irving Club.
Baker City	Baker	3,466	20																	U. S. Weather Bureau.
Bay City	Tillamook	14	15	54.2	+ 0.9	73	19	30	26	33	8.00	+ 0.25	1.52	0.0	18	8	4	19	nw.	J. O. Bozarth.
Bend	Crook	3,629	8	49.4	− 1.9	81	8	16	27	54	1.10		0.49	0.0	5	21	7	3	sw.	F. O. Minor.
Birch Creek	Wheeler	2,900	1	56.1[m]		83	6	31	26	42[m]	0.40		0.13	0.0	5					F. S. Matteson.
Black Butte	Lane	1,200	9	49.4		67	5	29	27	29	2.10	− 1.38	0.80	0.0	9	19	4	8	nw.	William Harris.
Blalock	Gilliam	237	11	58.4	+ 1.2	83	8	28	27†	31	0.13	− 0.44	0.10	0.0	2	15	8	6	w.	Geo. W. Long.
Burns	Harney	4,157	20	49.4	+ 3.8	84	10	15	26	50	1.16	+ 0.59	0.52	0.0	5	23	5	3		J. C. Welcome, jr.
Cascade Locks	Hood River	100	19	55.2	+ 1.0	74	8	34	28	34	8.32	+ 1.82	2.20	0.0	15	17	2	12	w.	Val. W. Tompkins.
Cazadero	Clackamas	503	1	55.8		78	8	31	26	33	4.56		1.66	0.0	15	7	2	22	se.	Alf Drill.
Christmas Lake	Lake	4,320	2	44.8		81	8	10	27	58	0.33		0.25	0.0	3	10	9	12	nw.	John C. Meen.
Condon	Gilliam	2,888	2																	C. H. Williams.
Corvallis	Benton	266	21	53.5	+ 0.9	74	7	29	28	38	2.56	− 0.38	0.98	0.0	9	10	10	11	sw.	Oregon Agricultural Coll.
Dayville	Grant	1,500	15	51.8	+ 0.4	88	8	18	27	52	0.64	− 0.18	0.29	0.0	7	20	11	0	nw.	Dr. J. Campbell-Martin.
Deadwood	Lane	350	....	55.1		76	7	34	26†	35	7.46		3.16	0.0	17	11	5	14	w.	Jos. Slemmons.
Doraville	Columbia	600	8	52.0		68	15†	31	26	29	5.02		1.84	0.0	18	6	2	23	nw.	Jos. Hackenberg.
Drain	Douglas	300	7	55.8		81	8	28	27	45[e]	3.01		1.04	0.0	9	8[a]	10[a]	12[a]	w.	Ira Wimberly.
Echo	Umatilla	625	5	54.6		84	8	18	27	39	0.29		0.11	0.0	4	17	5	9	w.	R. B. Stanfield.
Ella	Morrow	830	5	54.8		84	8	18	27	44	0.27	− 0.47	0.15	0.0	3	19	7	5	sw.	C. F. Tredson.
Eugene	Lane	453	20	55.2	+ 1.5	80	9	31	28	34	2.37	− 0.47	0.66	0.0	11	17	3	11	nw.	F. L. Barker.
Fairview	Coos	142	12	49.9	− 4.3	72	6	30	25	38	4.49	− 0.52	2.00	0.0	6	19	0	12	nw.	William Bettys.

TABLE 1.—*Climatological data for October, 1910. District No. 12*—Continued.

Stations.	Counties.	Elevation, feet.	Length of record, yrs.	Temperature, in degrees Fahrenheit.						Precipitation, in inches.				Number of rainy days, .01 inch or more.	Sky.			Prevailing wind direction.	Observers.
				Mean.	Departure from the normal.	Highest.	Date.	Lowest.	Date.	Greatest daily range.	Total.	Departure from the normal.	Greatest in 24 hours.	Total snowfall unmelted.		Number of clear days.	Number of partly cloudy days.	Number of cloudy days.	
Oregon—Cont'd.																			
Falls City	Polk	335	12	54.0	+ 3.3	76	15	29	26	36	5.74	+ 0.54	2.70	0.0	10	15	2	14	s.	Chas. F. Vick.
Forest Grove	Washington	220	20	54.5	+ 2.7	81	1	31	26	40	3.96	+ 0.43	1.15	0.0	14	4	15	12	ne.	Pacific University.
Gardiner	Douglas	72	20	56.6	+ 1.8	75	19	32	13	32	4.58	− 1.17	1.62	0.0	8	21	5	5	.....	Hon. J. S. Gray.
Glendale	do	1,441	5	53.5	.....	88	8	30	29†	46	1.76	.....	0.85	0.0	3	22	6	3	nw.	B. J. Simpson.
Glenora	Tillamook	575	18	49.4	− 1.3	69	1	28	28	32	15.78	+ 6.24	2.90	0.0	17	10	6	15	sw.	Mrs. Jennie Reeher.
Gold Beach	Curry	40	8	53.2	.....	75	26	35	26	36	3.39	+ 3.13	1.39	0.0	6	18	6	7	nw.	C. Dewey.
Granite	Grant	4,680	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	L. M. Ford.
Grants Pass	Josephine	956	21	55.8	+ 1.9	86	7	28	27	47	1.56	− 0.57	0.88	0.0	5	20	3	8	sw.	John B. Paddock.
Grass Valley	Sherman	2,381	8	49.6	+ 1.4	80	9†	20	24	41	0.20	− 0.49	0.20	0.0	1	16	13	2	sw.	Oreg. Ry. & Navigation Co.
Grindstone	Crook	5,000	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Orrin C. Mills.
Headworks	Clackamas	719	4	54.6	.....	70	14	37	13	30	6.28	+ 0.10	1.50	0.0	11	9	3	19	ne.	Portland Water Works.
Heppner	Morrow	1,950	21	52.3	+ 1.0	82	8	20[b]	27	45[b]	0.42	− 0.68	0.15	0.0	5	17	8	6	nw.	Ralph Kenton.
Hermiston	Umatilla	450	3	54.6	.....	84	8	17	17	42	0.25	.....	0.13	0.0	3	19	9	4	.....	C. W. Kellogg.
Hood River	Hood River	300	19	50.6	− 1.1	72	11	25	28	37	2.05	− 0.52	1.45	0.0	4	.....	.....	.....	w.	H. L. Hasbrouck.
Huntington	Baker	2,165	9	55.7	.....	80	1†	32	22†	36	0.01	− 0.45	0.01	0.0	1	20	5	6	se.	J. M. Day.
Jacksonville	Jackson	1,640	21	56.0	+ 2.5	86	8	35	2†	41	1.59	− 0.18	0.90	0.0	4	24	1	6	.....	E. Britt.
Joseph	Wallowa	4,400	21	46.2	+ 2.0	75	8	20	27	36	2.04	+ 0.64	0.50	0.0	9	13	8	10	s.	F. F. McCully.
Klamath Agency	Klamath	4,169	2	45.2	.....	76	8	19	31	53	1.17	.....	1.10	0.0	2	22	3	6	w.	Edson C. Watson.
Klamath Falls	do	4,250	15	49.3	+ 0.1	81	8	25	2	44	1.62	+ 0.56	1.25	0.0	5	24	3	4	nw.	W. H. Heileman.
La Grande	Union	2,784	24	52.4	+ 2.6	83	9	21	27	45	1.08	− 0.57	0.32	0.0	5	18	2	11	w.	W. A. Worstell.
Lakeview	Lake	4,800	7	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. L. Horton, jr.
McKenzie Bridge	Lane	2,150	1	51.6	.....	77	7†	26	28	46	5.79	.....	2.12	0.0	10	14	1	16	sw.	Howard W. Turner.
McMinnville	Yamhill	12	6	54.7	+ 2.0	75	15	29	26	33	3.76	+ 0.37	1.83	0.0	9	8	9	14	sw.	U. S. Weather Bureau.
Madras	Crook	1,400	7	.....	.....	.....	.....	.....	.....	.....	0.85	.....	0.65	0.0	4	23	7	1	nw.	Geo. Frissell.
Marshfield	Coos	4,070	4	54.6	.....	79	15†	34	31	40	4.42	.....	1.65	0.0	13	.....	.....	.....	nw.	J. H. Pruett.
Merrill	Klamath	180	22	48.5	.....	80	7	21	2	50	0.91	.....	0.91	0.0	1	24	4	3	.....	Mrs. Agnus Ritchson.
Mikkalo	Gilliam	1,600	4	52.0	.....	78	9	22	27†	40	T.	.....	T.	0.0	0	25	2	4	w.	Frank Little.
Miramonte Farm	Clackamas	195	21	55.0	+ 2.4	74	8	32	26†	32	3.53	+ 0.38	1.45	0.0	12	7	11	13	sw.	G. M. Muecke.
Monroe	Benton	350	13	54.4	+ 1.0	76	7	31	26	27	3.03	− 0.25	1.63	0.0	10	13	9	9	sw.	L. A. Peek.
Mount Angel	Marion	485	24	56.0	+ 2.8	74	8	31	3	31	4.85	+ 1.18	2.25	0.0	7	17	6	8	s.	Dr. U. F. Fisher.
Mountain Park	do	1,440	4	.....	.....	.....	.....	.....	.....	.....	5.71	.....	2.10	0.0	5	9	5	9	w.	M. Markley.
Musick	Douglas	5,000	.....	48.5	.....	70	28	30	2†	27	7.11	.....	2.51	3.0	10	19	3	9	sw.	Alex. Lundburg.
Newport	Linton	69	22	54.6	+ 0.4	78	19	40	13†	34	5.31	+ 0.57	2.07	0.0	13	11	5	15	sw.	William Matthews.
Paisley	Lake	4,500	6	50.8	.....	78	7	30	27	33	0.29	.....	0.25	0.0	2	23	5	3	sw.	E. C. Woodward.
Pendleton	Umatilla	1,070	20	52.2	+ 0.7	86	8	16	28	50	0.91	− 0.28	0.36	0.0	4	18	11	2	sw.	E. F. Averill.
Pilot Rock	do	1,817	1	54.5	.....	81	8	24	27†	40	0.53	.....	0.24	0.0	6	22	2	7	nw.	John P. McManus.
Pompeii	Clackamas	3,879	15	47.2	+ 0.8	72	8	28	26	29	8.59	+ 2.61	2.96	T.	10	9	12	10	sw.	O. C. Yocum.
Portland	Multnomah	57	38	56.0	+ 2.7	75	8	40	26	24	3.44	− 0.11	1.07	0.0	13	3	11	17	nw.	U. S. Weather Bureau.
"P" Ranch	Harney	4,300	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. P. Jefferson.
Prineville	Crook	2,864	13	49.4	− 0.5	85	8	15‖	27†	59‖	0.98	+ 0.34	0.70	0.0	4	22	3	6	.....	Geo. Whitels.
Prospect	Jackson	2,750	4	52.5	.....	82	7†	27	23	52	2.99	.....	1.30	1.1	7	15	11	5	w.	E. F. Graham.
Ramsey	Wasco	1,350	....	50.4	.....	73	8	23	28	48	0.80	.....	0.50	0.0	4	13	14	3	w.	Mrs. Iva B. Collins.
Range	Grant	3,500	1	45.3	.....	80	7†	14	1	58	2.12	.....	0.55	0.0	4	17	7	7	.....	Craig Thom.
Richland	Baker	2,350	8	50.4	.....	83	9	18	27	47	1.04	.....	0.75	0.0	4	18	8	5	.....	C. G. Morgan.
Riverside	Malheur	3,000	11	53.9	+ 6.7	93	9†	12	27	66	0.48	− 0.16	0.20	0.0	4	18	9	2	w.	Mrs. Leah Fairman.
Roseburg	Douglas	523	33	54.0	+ 0.1	79	8	35	27	34	2.71	+ 0.02	1.44	0.0	10	7	18	6	nw.	U. S. Weather Bureau.
Salem	Marion	120	20	56.5	+ 2.9	72	7	35	26†	28	1.80	+ 1.28	0.89	0.0	9	8	3	20	sw.	M. P. Baldwin.
Siskiyou	Jackson	4,115	1	53.4	.....	79	8	32	13	30	1.50	.....	1.00	0.0	4	14	9	8	sw.	U. S Weather Bureau.
Sparta	Baker	4,150	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Hon. J. A. Wright.
Stafford	Clackamas	400	13	55.6	+ 1.8	75	8†	33	26	29	4.51	+ 0.80	1.89	0.0	10	.....	.....	.....	sw.	John P. Gage.
The Dalles	Wasco	112	35	55.6	+ 3.2	78	8	26	27†	30	1.01	− 0.23	0.36	0.0	7	15	6	10	w.	S. L. Brooks.
Toledo	Linton	75	20	59.9	+ 5.4	78	10	45	4†	29	5.85	+ 0.55	1.60	0.0	11	15	14	2	sw.	C. B. Crosno.
Umatilla	Umatilla	340	14	56.0	+ 1.7	82	8	22	27†	39	0.25	− 0.46	0.16	0.0	2	28	0	3	w.	Mrs. Helen T. Duncan.
Vale	Malheur	2,242	18	54.4	+ 6.0	88	9	15	28†	54	0.74	+ 0.14	0.25	0.0	6	24	6	1	nw.	H. P. Osborn.
Van	Harney	3,506	4	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	Geo. Howe.
Wallace Orchard	Polk	170	1	55.0	.....	75	8	30	26†	36	2.75	.....	1.33	0.0	9	5	21	5	.....	Chas. A. Parks.
Wallowa	Wallowa	2,935	7	49.0	.....	84	8	17	27	50	1.87	.....	0.89	0.0	8	14	2	15	nw.	L. J. Coverstone.
Wasco	Wasco	1,263	2	51.6	.....	72	11	29	28	27	0.86	.....	0.41	0.0	6	17	8	6	w.	A. J. Swift
Warmspring	Crook	1,200	8	51.7	.....	86	8	19	28	48	0.62	.....	0.52	0.0	2	20	5	6	nw.	C. C. Covey.
Weston	Umatilla	1,800	20	54.5	+ 4.6	80	8	20	25	45	1.42	− 0.54	0.70	0.0	7	10	9	12	sw.	M. A. Baker.
Williams	Josephine	1,368	17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	J. M. John.
Yonna	Klamath	.....	3	45.8	.....	80	8	16‖	28	52‖	1.38	.....	0.73	0.0	6	22	7	2	s.	Jacob Rueck.

[a], [b], [c], etc., indicate, respectively, 1, 2, 3, etc., days missing from the record.
* Precipitation included in that of the next measurement.
** Temperature extremes are from observed readings of the dry bulb; means are computed from observed readings.
† Also on other dates.
‡ Separate dates of falls not recorded.
§ Data are from standard instruments not supplied by the U. S. Weather Bureau.
‖ Instruments are read in the morning; the maximum temperature then read is charged to the preceding day, on which it almost always occurs.
Estimated by observer.
Precipitation for the 24 hours ending on the morning when it is measured.
T. Precipitation is less than 0.01 inch rain or melted snow.

TABLE 2.—*Daily precipitation for October, 1910. District No. 12, Columbia Valley.*

Stations.	River basins.	Day of month.																												Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Montana.																																	
Anaconda	Missoula	.27		.57	T.								*	.14			T.	*	.05				T.			.19						.09	1.31
Bison Mountain	do	.05		.50	.15									.02				.10	.60								.72					.17	2.31
Butte	do	.25		.15	T.													.35								.45	T.					.15	1.35
Columbia Falls	Flathead	.58	.20	.54	T.	*	*	*	*	*	*	*	*	*	*	.65			.20	.32					.18	.08							2.75
Como	Bitter Root	.04	.20	.61	.28								.38	.26					.08							.08						.11	2.04
Dayton	Flathead																																
East Anaconda	Missoula	.35	T.	.50	T.									.09			T.	.02	T.							.15						.15	1.26
Fortine	Flathead	.60	.14	.20	.20		T.	.07										.15	.05					T.		T.					.03		1.44
Hamilton	Bitter Root			.54	.05									.56					.11														1.26
Hat Creek	Missoula		.48	.19	.32												T.	.38	.48								.72					.17	2.74
Kalispell	Flathead	.33		.10	.05			.35										.21	.06						.08	.11							1.29
Lost Creek	Missoula		.38		T.									.15				T.	.16								12				.10	.04	0.95
McGinnis Meadows	Kootenai	.64	.06	.79	.30	.05		.20										.08	.09							.42							2.63
Missoula	Missoula	.20	.07	.36	T.									.10				.08	.10							.06	.08					.15	1.20
Ophir	do	.23		1.20	.05								T.					T.	.25							.35	.15					.06	2.29
Ovando	do		.25	.10	.35	T.								.15				.05	.50						T.	.30						.10	1.80
Philipsburg	do	T.	.13	.06	.16									.13				.08	.10	T.						T.	.19					.10	0.95
Plains	Columbia		.80		.10													.10	T.												.30		1.30
Pleasant Valley	Kootenai	.82	.02	.66	.11	.03		.36	.02									.14	.13						.06	.08							2.43
Polson	Flathead		.50	.20	.30														.50							.10							1.60
St. Ignatius	do																																
St. Regis	Missoula	.49	.03	.51	.20														.26														1.49
Saltese	do	1.32		1.80	.76	.38												.42						.38	.30							5.36
Snowshoe	Kootenai	1.26	.38	3.32	.90	.68		1.07	T.									.56	.15					T.	.72	.51					T.	T.	9.55
Troy	do	.90	.40	1.50	.22	.15	.05	.58										.37	.05					T.	.10	.30							4.62
Upper Lake McDonald	Flathead	.86	.31	1.48	.12	.26	.03	.10										.52	.15					.08	.30	.36							4.57
Willow Glen Stock F'm	Missoula	.47											.07					.05	T.							.31						.32	1.22
Wyoming.																																	
Afton	Snake		.57		.15								.15	.35			.15		.54														1.91
Alta	do		.70		.38									.39			.10		.75							T.							2.32
Bedford	do		.46		.15									.43					.54														1.58
Snake River	do		.40		.60	.10																					T.					T.	1.10
Nevada.																																	
San Jacinto	Snake								.24	.07			.32	T.																			0.63
Utah.																																	
Standrod	Raft																																
Idaho.																																	
Albion	Upper Snake	T.	.42	T.	.20								T.				.15	.08	.19	.11													1.15
Almo	do																																
American Falls	do																																
Blackfoot	do	.07		.13								T.	.08			.02	.01	.18	T.								T.						0.49
Blackfoot Dam	do		.63	.13													.33	.04	.45								T.						1.58
Bock's Ranch	Boise																																
Bogus Creek	Payette	.17	T.	.93										.09	.24			.48	.17								.04						2.12
Boise	Boise	.05		.43								.04		.21			.01	.25							T.								0.99
Bonners Ferry	Upper Columbia	.81	.19	1.30	.06			.07										.16							.40	.10							3.09
Boulder Mine	Boise	.28		.98	.50								.07	.33			.03	.13	.27														2.59
Buhl	Upper Snake																																
Burke	Upper Columbia																																
Caldwell	Boise	.04		.25	.03										.02				.06														0.40
Camas	Lost River Region				.14																												
Cambridge	Middle Snake	.02		.58	T.									.22				.25	.15														
Cedar Creek Dam	Upper Snake				.05														.02														0.07
Chesterfield	do		.34		.14								.03	.07		T.			.15	.10							T.						0.83
Cœur d'Alene	Upper Columbia																																
Cottonwood Creek	Boise																																
Crawford	Payette	.22		T.	.12								.06	.05				T.									T.						0.45
Culdesac	Clearwater	.67			.03															.23						.94							1.87
Deary	do																																
Dent	do	.54		1.46	.36	T.												.58								.36					.39	3.60
Driggs	Upper Snake	T.	.49		.41									.34			T.	.89									T.				T.	2.13
Edie	Lost River Region																																
Edwardsburg	Salmon				T.									.70			T.	T.	.15														0.85
Emmett	Payette	.08		.50								.14		.03					.04														0.79
Flowers	Wood-Malad																																
Forney	Salmon				.60							.05	.50					.05															1.20
Garden Valley	Payette	T.		1.55									T.	.47				.33															2.35
Garnet	Middle Snake	.20		.25													.20	.25															0.90
Glenns Ferry	do			.10	.11												.05		.05														0.31
Gooding	Wood-Malad		.01	.09	.26												.07	T.	.02														0.45
Grand Forks	Upper Columbia																																
Grandview	Middle Snake																																
Grimes Pass	Boise	.23	.16	1.53								.03	.04	.25			.02	.36								T.							2.62
Guffey	Middle Snake	.01		.04								T.	.06	.20			.06	.22	.02														0.61
Hailey	Wood-Malad		.03	.19	.33												.63	T.															1.18
Hotspring	Owyhee	T.	T.		.15												.23	.05	.15														0.58
Idaho City	Boise																																
Idaho Falls	Upper Snake		.52		.18												.09	.05	.31														1.15
Indian Valley	Middle Snake																																
Irwin	Upper Snake		.31	T.	.27							T.					.11	T.	.68														1.37
Kellog	Upper Columbia	.39	.39	.89	.93	.19			.15								.04		.59							.35	.05						3.97
Kirkham	Payette																																
Kooskia	Clearwater																																
Lakeview	Upper Columbia	.75	.50	1.58	.25	.03		.62										.42	T.															4.15
Landore	Middle Snake	.66		1.58	.12	T.								.41				.33	.28	.02						T.	.15					T.	3.55
Lewiston	Clearwater	.26	.18	.22														.23								.01						.16	1.06
Little Camas	Boise	.08		.87									.02				.41	.19															1.57
Long Gulch	do			.85	.20								.07				.17	.17															1.46
Loon Creek	Salmon											T.		.35			.03	.13	.04							.18					.01		
Lost River	Lost River Region																																
Lowry	Owyhee																																
McCall	Payette																																
Mackay	Lost River Region				.22									.10				.41	.05								T.						0.78
Meadows	Salmon	.22	.12	.90	.02	.03								.21	T.			.24	.01								.18						1.93
Mesa	Middle Snake																										T.						
Middle Fork	Clearwater	.92	.05	.48	.06									.08				.10	.30							.10						.08	2.17
Milner	Upper Snake	T.	.16	T.	.27									.02		T.	.41	T.															0.86
Moscow	Upper Columbia	.25		1.19	.03													.59														.15	2.21
Mountainhome	Middle Snake				.41												.45	.11	.09														1.06
Murtaugh	Upper Snake		.18		.30													T.	T.														0.48
Nez Perce	Clearwater	.50		.21	.03									.04				.41	.09						.17							.22	1.67
Oakley	Upper Snake	T.	.15														.25																0.40
O'Hara Bar	Clearwater																																
Orofino	do	.58		.92	.51	.02							T.	T.				.36								.38						.25	3.02

TABLE 2.—*Daily precipitation for October, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Idaho—Cont'd.																																	
Payette	Payette	.07	.01	.27									.10	.10				.13	.13							T.							0.81
Peaceful Valley	Middle Snake																																
Pebble	Upper Snake	T.	.33		.55								.06	.05			T.		.17														1.16
Pierson	Salmon			.73	.35												.18	.10															1.36
Pine	Boise																																
Placerville	...do																																
Pleasant Valley	...do	.06		.33									.05	.27			T.	.30															1.01
Pocatello	Upper Snake	.19	.03	.33	.03								.19	.12		.01	T.	.19	.07								.01							1.17
Pocatello Nursery	...do		.04		.40								.15					.80															1.39
Poplar	...do																																
Porthill	Upper Columbia	.59	.02	1.02	.13	.01		.07										.11	.07						.19	.29							2.50
Powers Ranch	Boise																																
Pyle Creek	Payette	.10	.16	1.48	.04									.59				.09	.30														2.76
Rattlesnake Creek	Boise																																
Richfield	Wood-Malad	T.		.13	.14	T.									.02		.15	T.															0.44
Roseworth	Upper Snake	T.	.12	.33	T.												.05	*	.15														0.65
Ruby Creek	Boise																																
Rupert	Upper Snake		.10	T.	.14	T.											.10	.01	.03	.02													0.40
St. Maries	Upper Columbia																																
Salmon	Salmon			T.	.11									T.			T.	.25	T.				T.				.05					T.	0.41
Salmon River Dam	Upper Snake	T.	.20		.45									.01			.11	.03	.10														0.90
Sandpoint	Upper Columbia																																
Sheep Hill	Boise	.17		1.42									.01	.38			.03	.17	.08								.01						2.27
Shoshone	Wood-Malad	T.	.16	.07	.09												.27	T.															0.59
Silver City	Owyhee	.24		.35									.07	.07			.28	.40	.12														1.53
Smith Prairie	Boise																																
Smith Ranger Station	Upper Columbia																																
Soldier Creek	Wood-Malad			T.									T.	.10			.87									T.							0.97
Springfield	Upper Snake				.12																												0.12
Sugar	...do	.09			.22								.02			.01	.15	.40								.04							0.93
Sunnyside	Middle Snake	T.	.02	.08										.23	.04		.15	.04	.07														0.63
Tripod Mountain	Payette	.26		.09	.07								.15	.35				.37	.30														1.59
Twin Falls	Upper Snake	.05	.13														.30																0.48
Vernon	...do		.24		.35									.90			.59	.08	.33													T.	2.49
Wallace	Upper Columbia	1.13	.12	2.91	.85	.16		.18	T.					T.				.33	.12					T.	.03	.70						T.	6.53
Wendell	Wood-Malad	.07		.03	.30												.19	T.															0.59
Washington.																																	
Aberdeen	Coast	1.25	2.70	.73	.51	.25	.93	.07	.72	.11			.09	.38					1.59				.39	.13	.16					.07			10.08
Anacortes	Puget Sound	.36	.24	1.08	.33	.03	.24				.25	.01					.03	.37						.01	.73							.31	3.99
Baker	...do	1.75	1.10	1.94	1.31	.29	.43		.40	.48	.08				.21			.87					.18	.18	2.28							.20	11.70
Bellingham	...do	.18	.81	.38	.27	T.	.30		.80	.19					.10		.05	.68							.92	T.						.26	4.94
Blaine	...do	.30	.34	1.05	.48	.17	.44	.02	.70	.38		T.			.42	.06	.15	.92	.04				.14	.06	.85					.03	.20	6.75
Blalock	Columbia																																
Blewett	Wenatchee																																
Bremerton	Puget Sound	.82		1.84	.06	.17	.24	.56	.01		.54		T.	.03	.22			1.10			.01	T.			.13	.11						.12	5.96
Brewster	Columbia	.14	.28															.03															0.45
Bumping Lake	Yakima	.27	2.30	1.57	.15	T.	.23	T.	T.	T.	T.	T.	.12	T.			.65	.08					T.	T.	.22							T.	5.59
Cashmere	Wenatchee	.04	.22	.63	.35		T.	.06	T.				T.					.23							T.								1.53
Cedar River	Puget Sound	1.55	.30	1.60	.32	.11	.32	1.20	.12	.92	.06	.04					1.19	.08					.12	.06	.14							.20	8.42
Centralia	Coast	.63	.65	1.49	.44	T.	.18	.21	.25	.40	.12		.05		.05			.63					.15	.04	.06							T.	5.35
Cheney	Spokane	.42		1.00		.02		.03										.06								.01							1.54
Clealum	Yakima	.20	.26	.96	.58	.07		.08																.02									2.17
Clearbrook	Puget Sound	.10		1.58	.43	.31	.33		.57	.91					.11	.31	.11	1.66	.06			.07		1.07	.48	.21						.39	8.70
Clearwater	Coast																																
Colfax	Palouse		1.82															.32								.06							2.20
Colville	Columbia	.42	.13	.09	T.													.18							.04								0.86
Conconully	Okanogan	.12	.26	.28											.06		T.	.05															0.77
Cowiche	Yakima																																
Crescent	Spokane	.05		.98			.03											.31															1.37
Davenport	Columbia	.21		.44		.04	.02	T.										.41															1.12
Dayton	...do	.46		1.11														.29								.05					.06		1.97
Detroit	Puget Sound	.30	.95	3.35	.41	.25	.30	.41	.20	.27	.05		.06	T.	.10		.15	1.15					.03	T.	.77	T.				.03	.13		8.91
Dixie	Columbia	1.02	.06	1.73	.52	.04												.80								.33					.08		4.58
Duckabush	Puget Sound	.55	1.55	.22	.14	.04	.34	.23	.55	.37	.02							1.34							.23	.36				.06			6.00
East Sound	...do																																
Ellensburg	Yakima	T.	.05	T.	.06										T.		.05																0.16
Ephrata	Columbia																																
Forks	Coast	.64	1.58	1.62	.83	.58	1.52	.98	2.09	.81						.15	1.25	2.36					.33									.75	15.49
Fort Simcoe	Yakima		.20	.45	.43								.16																				1.24
Goat Lake	Puget Sound	3.35	.56	4.57	1.37	.88	.28	2.11	.50	.54	.06			.02	.07		.98	1.20	.30				.05	.05	.75	2.27				.10	.09		20.10
Gold Creek	Yakima																																
Gold Hill	...do																																
Goldendale	Columbia			.20	.38																												0.58
Granite Falls	Puget Sound	1.96	.37	1.87	.30	.11	.10	.29	.49	.50	.10							.44	.12				.12	.11	.21	.97				T.	.02		8.08
Guler	Columbia																																
Hatton	...do	.14		.15											T.			.19												T.			0.48
Huntsville	...do																																
Irene Mountain	...do	.16	.05	.11											T.			.11							T.								0.43
Kachess Valley	Yakima																																
Kennewick	Columbia																									T.							T.
Kettle Falls	...do	.48	.08	.34														.15															1.05
Kiona	Yakima		.16								.01	.04						.10															0.35
Kosmos	Columbia	1.02	1.00	1.08	1.00	.02				.02	.01						.02	.09														.04	4.46
La Center	...do		1.00	.50	1.00					.41			.23					.37					.03	.10									3.64
La Crosse	Palouse	.10		.85														.35								T.						.01	1.31
Lake Clealum	Yakima	.21	.30	3.42	1.40	.12	.04	.24	T.	T.	T.	T.	.03	T.				.60	T.				T.		.23									6.59
Lake Kachess	...do	.27	1.15	2.86	1.05	.80	.12	.49					.06				T.	1.05					T.		.40	.33								8.05
Lake Keechelus	...do	2.00	.40	2.30	1.60	.45		.72		.15				T.			.08		.05				.08		.60	.30								8.73
Lakeside	Columbia	T.	.26	.26	.01	T.	T.	T.		T.	T.				.02			.06							T.									0.61
Laurel	...do	.24	.34	1.43	.40	.10							.12					.60																3.23
Laurier	Kettle	.26	.20	.19	.04													.25	.01						.08									1.03
Lester	Puget Sound	1.15	1.35	2.70	.62	.10	.05						.08					1.05					.14		1.15	.26				.08	.25		8.98
Lone Tree	Coast	1.13	1.42	2.88	.30	.20	.28	.80	.49	.34	T.		.01	T.	.84	T.	.19	1.45	.05	T.			.24	.14	.38	T.				.01	.22		11.37
Longmire Springs	Puget Sound	.40	.20	.70	.65	.51	.28	.82	.20	.18		.10			.15	.08	.11		T.	.12	.06	.09				.20	T.							4.85
Lost Creek	Columbia		.07	.18													.15	.11														.08	0.59
Lucerne	...do																																
Lyle	...do																																
McCumbers Ranch	...do	.20	.30	1.90	.80								.10					.40																3.70
Merritt	Wenatchie																																
Mottinger	Columbia		.17		T.												.13													T.			0.30
Mount Pleasant	...do	1.15	.28	.92	.80	.15	.02	T.	.20				.23	.01			.18	.65	.04				.08	.08	.10	.05							4.95
Moxee	Yakima		.03	.04									.04																		.01		0.12
Newport	Pend d'Oreille	.44	.07	1.01	.30	.06	T.	.22										.32	.01						.10								2.53
Nighthawk	Okanogan																																

TABLE 2.—*Daily precipitation for October, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Washington—Cont'd.																																	
North Head	Coast	.17	.94	.55	.26	.09	.43	.01	.34	.15			.03	.01	.11		.41	.31	.03				.08	.04	.05							.04	4.05
Northport	Columbia	.80	T.	.40														.21							T.	.05							1.46
North Yakima	Yakima	T.	.04	.01	T.			T.			T.		.03					.04													T.	0.12
Nutland	Columbia			.02	.15													.05														0.22
Odessa	do	.08	.02	.19	T.	T.	T.				T.							.35						T.								0.64
Olga	Puget Sound		.45	1.02	.33		.15		.63	.37						12		.56							.97						.36	4.96
Olympia	do	.50	1.40	2.77	.28	.11	.28	.52	.10	.58	.14		.06	.03		.04	.03	.81					.05		.27	.10					T.	8.07
Omak	Okanogan		.13																													
Oroville	do																									.37					.14	3.03
Peola	Snake	.20		1.80	.24													.28														1.20
Pomeroy	do	.40	.05	.60															.15													4.88
Port Crescent	Coast	.11	1.07	.53	.09	.01	.25		.51	.05				.01	.01		.21	.58				.03	.02	.06	.76						.08	.50	1.89
Port Townsend	Puget Sound	.26	T.	.50	.08	T.	.04		.36	.22							.05	.12						T.	.10							.16	2.43
Pullman	Palouse	.43	.67	.75	.02													.46								.02					.08	
Quinisault	Coast																															
Republic	Kettle	.65	.04	.20	T.													.10							.02							1.01
Rex Creek	Columbia																															
Ritzville	do	.02	.25	.25	.03													.26														0.81
Rock Lake	Palouse	.15		.71														.50														1.36
Rosalia	do	.33	.15	.10			.01	.02										.71								.04				.04		2.40
Russells Ranch	Yakima	.24	.18	.80	.60	.12	T.						.11	T.				.39							.04								2.48
Scenic Hot Springs	Puget Sound																															
Seattle	do	.46	.45	.76	.02	.07	.73	.07	.36	.20	.07		.05	T.	.03		.12	.43	T.			T.	.04	T.	.03	.02					.01	.10	4.02
Sedro-Woolley	do	.65	.31	2.00	.67	.05	.24		.96	.36					.15		.02	.80						.12	1.68							.42	8.43
Sixprong	Columbia		.01	.02														.08														0.11
Skagit Power Dam	Puget Sound																															
Snohomish	do	1.40	.17	1.00	.05	.08		.30	.38	.46	.10				.04		T.	.45					.03	.02	.05	.21					.10	.13	5.03
Snoqualmie Falls	do	1.76	.46	1.88	.30	.12	.52	1.25	.08	.65	.06	T.	.04		.04	T.	.07	.96	T.				.08	.11	.34	.05				T.	.01	.21	8.99
Snoqualmie Pass	Yakima																															
Snyders Ranch	Columbia		.25	.82	.07	T.												.25							.16							1.55
South Bend	Coast	.74	1.35	3.50	.60	.41	.85	.56	.52	.24	.04		.04		.17	.03	.26	1.87	.17				.03	.12	.30	.08						.10	11.98
Spokane	Spokane	.25	.21	.41	.01	T.	T.	.05										.49						T.	T.	T.							1.42
State University	Puget Sound	.96	.19	.94	.09	.03	.07	.70	.02	.55	.07		T.	.05	.04		T.	.66					.03	.10	.05	.04					.04	.04	4.67
Stokes Ranch	Columbia	.10		1.04		T.	T.								T.		T.	.22							.09							1.45
Sullivan Lake	Pend d'Oreille	.12	.06	.65	.09	.02					T.							.29	.05						.15	.40					T.	.20	2.03
Sumner	Puget Sound	1.31	.28	1.17	.36	.02	.12	.68	.17	.59	.07		.05	.05	.04		.09	.74					.07		.07	.01						.09	5.98
Sunnyside	Yakima												.04					.12														0.16
Tacoma	Puget Sound	.35	1.21	1.04	.12	.04	.67	.09	.38	.15	.06		.05	.01	.09		.40	.35				T.	.01	.01	.03	T.					T.	.18	5.22
Tatoosh Island	Coast	.08	1.69	.27	.35	.21	.14	.23	1.04	.02				.27	1.22		.84	.42	.04	T.	.01	.04	.03	.88	.46					.01	.05	.08	.44	8.82
Tieton	Yakima		.25	.88	.83	.04							.12					.14															2.26
Touchet	Columbia	T.	T.	.10	T.	.05							T.					.25							T.						.01	0.41
Touchet Ridge	do	1.68		2.00		.30												.62								.35					T.	4.95
Trinidad	do																	T.														T.
Twin Sister Lakes	Yakima																															
Twisp	Columbia																															
Tyee	do																															
Upper Clealum Valley	Yakima																															
Vancouver	Columbia	.33	.47	1.46	.27					.30	.08		.10					.39					.02	T.									3.42
Vashon Island	Puget Sound	.84	.45	1.07	.17	.07	.57	.77	.22	.52	.12	.01	.05	T.	.10		.09	.82	T.				.02	T.	.14	.02	T.				.02	.10	6.17
Wahluke	Columbia		.05	.10														.36														0.51
Wallace	Okanogan		.21	.53		.02				.03	.01				.12			.11															1.03
Walla Walla	Columbia	.41	.58	T.	.01	.01												.35						T.		.01					.01	.01	1.39
Waterville	do		.14	.04	.05													.14						T.								0.37
Wenatchee (near)	do		T.	.32	.13	T.	T.	T.					T.					.03														0.48
West Branch	Spokane																															
Wilbur	Columbia		.30			.20												.62														1.12
Yale	do																															
Zindel	Snake	.41		.59				.47										.30								T.					.34	2.11
Oregon.																																
Albany	Willamette	.24	.10	1.14	.26	.20	T.			.01	.08	.02	.34					.20	.01								.04					2.64
Ana River	Southeast Drainage	.02		.63								.04																				0.69
Ashland	Rogue	.20		.29								.70						T.														1.19
Astoria	Columbia	.38	1.34	2.89	.48	.30	.19	.41	.37	.43	.04		.02		.11	T.	.05	1.26	.04				.04	.04	.46	.15					T.		8.97
Bagleys Ranch	Snake	.14		.11								T.			.16										T.	T.						0.41
Baker City	do																															
Bay City	Coast	.77	1.15	1.30	.62	.41	.09	.21	.05	.33	.08	T.	.20	T.			.05	1.52	.08			.09			.58	.42					.05		8.00
Bear Creek	Deschutes			.12								.20	.61					.24														1.17
Bear Valley	John Day	.20		.66	T.							T.	.36					.27														1.49
Beach Creek	do	.60	.05	.03	T.							.42	.10				.21	T.														1.41
Bellfountain	Willamette	.27	.26	1.74	.35	.09					.13	.06	.40	.04			T.	.31	.01							.05							3.71
Bend	Deschutes	T.		.47	.03							.08	.49					.03														1.10
Big Basin	John Day	.15	.10	.10								.30																				0.65
Birch Creek	do	.01	T.	.12	T.	T.										.04	.13	.10														0.40
Black Butte	Willamette	.25	.10	.20	.30							.80	.20	.10			.10	.05														2.10
Blalock	Columbia			T.									.10					.03														0.13
Blue M't'n Sawmill	Umatilla	.40		2.00	.20													.66								.40						3.46
Buena Vista	Snake	.01	.02	.01	T.													.02	.02							.14						0.22
Burns	Southeast Drainage	.11		.38								.52	.05				.10															1.16
Burns Mills	do	.04	.18										.57						.28														1.07
Butte Falls	Rogue	.27		.80	.02							1.16	.04	.01				.14															2.44
California Gulch	Umatilla	.50		.20														.30															1.00
Canyon City	John Day																															
Cascade Locks	Columbia	1.36	.70	2.20	1.20	.22	.04	.11	.02	.02			.24	T.			.14	1.85	.04						.10	.08							8.32
Cascadia	Willamette		.39	1.47	.32	.37				T.		.21	.62	T.				.55								T.							3.93
Casadero	do	.73	.10	1.66	.35	.12	.03	.03		.31	.03	T.	.18	.03	T.			.60					.17		.02	.20							4.56
Christmas Lake	Southeast Drainage			.04									.25					.04															0.33
Columbia Mine	Snake			1.30	.04	.04							.18	.18				.43	.08						T.	.04					T.		2.29
Condon	John Day																															
Coquille River L. H.	Coast	.35		1.30	.25					.09	1.05	.85						.18															4.07
Cornucopia	Snake	.34	.02	1.40	.06								.22	.13				.46	.05						T.		.15				T.		2.83
Corvallis	Willamette	.16	.38	.98		.36				.05	.03		.44					.12								.04							2.56
Cracker Creek	Snake	.02	T.	.10	T.								.02	.01				.03	.02								T.						0.20
Crescent	Deschutes																															
Dayville	John Day	.06	T.	.08	.01								.29	.01				.18								T.	.01						0.64
Deadwood	Willamette	.02	.70	3.16	.68	.29	.02	.06		.11	.05	.18	.42					1.19	.04	.02		.50	.01		.01								7.46
Diamond "H"	Southeast Drainage																															
Doraville	Columbia	.39	.76	1.84	.44	.08	.01	.09	.07	.29	.11		.19	T.	.02		.02	.50					.07	.02	.06	.06							5.02
Drain	Umpqua	.50		1.04	.32	.06	T.			.02	.15	.55	.20					.17															3.01
Dufur	Columbia	.01	.01	.14	.13	.01					T.		.33				T.	T.														T.	0.63
Duncan	Umatilla	.45		.10	.65													.60	.05							.20							2.05
Echo	do	T.	.11	.05									.04					.09															0.29
Elkhorn Ranch	Coast	.42	2.55	.50	.16						.18	.90						.77					.02										3.50
Ella	Columbia			.09	T.								.03					.15															0.27
Embody	Interior drainage	T.	2.03										.13					T.															2.16

TABLE 2.—*Daily precipitation for October, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon—Cont'd.																																	
Eugene	Willamette	.05	.04	.50	.66	.04	T.				.21	.11	.52					.15	.08			.01										2.37
Fairview	Coast	2.00	.31								12	1.39	.12					.55														4.49
Fall City	Willamette	.27	.80	2.70	.86	.10				.03	.08	.02	.20					.68														5.74
Fir Glen	Coast	.20		1.48	.14	.07					.10	.90	.20					.11														3.20
Florence	do	.49	.18	1.57	.47	.15	.02	.02	.01	.08	.05	.13	.68				.09	.51								.04						4.49
Forest Grove	Willamette	.21	1.03	1.15	.60	.15	.02		.09	.07	.02		.19				.08	.31					.02		.02							3.96
Fort Rock	Interior			.11								.19																			0.30
Gallice	Rogue	1.00		1.05	.05	.02					1.10	.18						.14														3.54
Gardiner	Umpqua	.41		1.62	.50	.18				.24	.30	.85						.48														4.58
Glencoe	Columbia			.17								.05						.11														0.33
Gibbon	Umatilla	.50	.65	.50	.26													.56								.30						2.77
Glendale	Umpqua			.80	T.					T.	.11	.85	T.				T.															1.76
Glenora	Coast	1.02	2.21	2.80	2.90	2.40	.25		.51	.29			.04	.06			.20	2.09	.50				.02	.20	.45						.04		15.78
Gold Beach	Rogue	.31		1.39						.05		.65	.67					.32														3.39
Grande Ronde	Coast	1.40	1.30	1.50	T.		T.			T.	.05		T.				T.	T.										.06				4.31
Granite	John Day																															
Grants Pass	Rogue	.09		.36								.88	.18					.05														1.56
Grass Valley	John Day												.20																			0.20
Greenhorn	Snake	.40	.04	1.04	.07	.01							.28	.18	.01			.33	.02								.01				.02		2.41
Grindstone	Deschutes																															
Gumboot	Snake	.51		.74	.03									.17				.09	.01								T.					1.55
Gurdane	Columbia	.14	.06	.11		.05												.23														0.54
Happy Home	Umpqua	.20		2.04	.24						12	1.14	.44	.14				.28														4.60
Hay Creek	Deschutes	.17	.01	.34		.02							.50					.03														1.07
Haseldell	Willamette	.25	.30	.62	T.							.48	T.				.30															1.95
Head Works	do	1.50	.47	1.30	.40		.32					.52				.05	1.12	.06							.30	.25						6.28
Heppner	Columbia	.13	.07	.05	T.								.02					.15													T.	0.42
Hermiston	Umatilla		.10	.02														.13														0.25
Hilgard	Grande Ronde	.20	.40	.40	T.													.12								.10						1.22
Hood River	Columbia			1.45	.20								.10					.30														2.05
Hoover	Willamette	.65	.47	2.60	1.12								.53					.62								.03						6.02
Howardville Station	Grande Ronde	.43	.04	1.22	.13									T.				.47													.05	2.34
Huntington	Snake																	.01														0.01
Ibex Mine	John Day	.25	.01	.75	.08	.02							.21	.03	T.			.37	.04								.01					1.77
Ironside	Snake	.50		.20									.12	T.				.10														0.92
Jacksonville	Rogue	.04		.57								.90	.08																			1.59
Joseph	Grande Ronde	.50	.10	.20	.30									.25				.26	.07	.06						.30						2.04
Klamath Agency	Klamath					1.10							.70																			1.80
Klamath Falls	do	.01		.23								1.25	.03					.10														1.62
La Grande	Grande Ronde	.27		.32	T.													.26	.03							.20						1.08
Lakeview	Pitt																															
Lilyglen	Rogue	.21		.64	.03						1.06	.16																				2.10
Long Creek	John Day	.22	.03	.31				T.				.02	.33																			0.91
Long Valley	Pitt	T.		.48								.35	.17	.01				.07														1.08
McKenzie Bridge	Willamette	.61	2.12	.12	.82	.48						.08	.73	.01				.71							.11							5.79
McMinnville	do	.26	.63	1.83	.35	.05				T.		.12	.18				T.	.31				T.	.03			T.						3.76
Madras	Deschutes			.15	T.						.02		.65				.03															0.85
Maury	do		T.	.21	.05							1.07					.13															1.46
Meacham	Umatilla																															
Merrill	Interior Drainage											.91																				0.91
Metolius	Deschutes	.27		1.20	.24								.80				.10															2.61
Mikkalo	John Day		T.																													T.
Miller Prairie	Columbia		.24	.17	.03								.20	.20																		0.64
Miramonte Farm	Willamette	.52	.25	1.45	.33	.08		.02		.14	.03	.09				.03	.49									.10						3.53
Monroe	do	.11	.16	1.63	.19	.06					11	.05	.34					.33								.05						3.03
Mountainhome	Columbia	.62	1.03	2.52	.64	.25	.02	.14	.10	.25	.06		.08	.04			.07	.68	.04				.11	.04	.26							6.95
Mount Angel	Willamette	1.55	2.25		.12						.18						.04	.60				T.		T.		.11						4.85
Mount Hood	Columbia	.23	.71	1.31	1.28	.03							.30				.31	.04														4.21
Mountain Park	do	.70	.65	2.00	2.10													.26						T.								5.71
Mountain Ranch	Rogue			1.06							.67	.28						.07														2.08
Musick	Umpqua	1.19		2.51	.91	.36				.03	.75	.51						.80									.05					7.11
Newport	Coast	.53	.82	2.07	.06	.36	.03	.07	.11	.06	.10	.26	.08					.76														5.31
Ochoco	Deschutes			.45	T.	.40						.56						.12														1.53
Ochoco Creek	do	.02	.06		.19	.09							.63					.12														1.11
Owyhee	Owyhee	.12	.01	.20										T.				.14														0.47
Paisley	Southeast Drainage	.04		.25								T.																				0.29
Paulina	Deschutes			.15								.07	.56						.10														0.88
Pendleton	Umatilla	.36		.0	T.													.24													.01	0.91
Persist	Rogue	.31		.72	.07						1.23	.21						.37														2.91
Pilot Rock	Umatilla	.15	.04	.06	.03													.24													.01	0.53
Plush	Southeast Drainage																															
Pompeii	Columbia	1.12	.78	2.96	1.00	.48				T.			.32					.08	.29						.42	.14						8.59
Portland	Willamette	.38	.68	1.07	.26				.09	.28	.05		.14				.01	.34					.07	.05		.02						3.44
Post	Deschutes	T.		.15									.74					.08														0.97
Power House	Walla Walla	.30	T.	.45	.02	T.												.25								.07					.04	1.13
"P" Ranch	Southeast Drainage																															
Prineville	Deschutes			.17		.06							.70				.05															0.98
Prospect	Rogue	.04	T.	.90	.15	.05					1.30			.05				.50														2.99
Ramsey	Columbia		.10	.15	.05								.50					T.														0.80
Range	John Day	.40	T.	.50	.55	.05							.30					.32								T.						2.12
Ray Creek	Columbia	.08	.10	.09																												0.27
Reston	Umpqua	.15	.02	1.45	.13	.04					10	1.44	.13					.15								.01						3.62
Richland	Snake	.07		.20													.75	.02														1.04
Riverdale Ranch	Deschutes		T.	.12	.03							.50						.09														0.74
Riverside	Malheur	.10		.20								.08						.10														0.48
Rock Creek	Willamette	.20	T.	1.50	1.38	.71	.15					.41						.50								.10						4.95
Roseburg	Umpqua		.05	.90	.06					.04	.01	1.44	.16									.01										2.71
Rosland	Deschutes	.04	T.	.56	.04	.02					.02	.02	.47	.02			.02	.02														1.19
Salem	Willamette	.47	.07	.89	.12	.04				.02	.06							.09							T.	.04						1.80
Seneca	Southeast Drainage																															
Silver Lake	do																															
Siskiyou	Rogue	.20		.22							1.00							.08														1.50
Sisters	Deschutes	.20	.05	.95	.17					.02		.95						.05														2.39
Sparta	Snake																															
Stafford	Willamette	.60	.34	1.89	.41	.07	T.			.33	.05		.10				.06	.66														4.51
Starkey	Grande Ronde		.20										T.					.40								.25						0.85
Sugar Creek	Deschutes			.06								.60						.15	T.													0.81
Summit	Willamette	.60	.59	2.20	.44	.21	T.			.12	.01	.14	.33	.01				.39								T.						5.04
Summit Prairie	Deschutes	T.	.07	.30	.03	.03							.45				.14															1.02
Susanville	John Day	.30		.32	.02	.01							.33	.17				.25	.04				.02									1.46
Tamarack	do	T.	T.	.40	T.								T.				T.															0.40
Telocaset	Snake																															
The Dalles	Columbia	.09	.05	.36	.22	.02							.22					.05														1.01
Tinroof Cabin	Umatilla	.25	.40	.20	T.	.09							.08					.67	.04													1.73

TABLE 2.—*Daily precipitation for October, 1910. District No. 12*—Continued.

Stations.	River basins.	Day of month.																													Total.
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	
Oregon—Cont'd.																																	
Toledo	Coast	.90	.90	1.60	.35	.40			.20	.10			.20	.25				.60	.35														5.85
Trask	do	1.50	1.70	2.00	.70	.65	.11										1.00	1.10	.50						.80					.02			10.08
Umatilla	Columbia	T.	.16															.09												T.		0.25
Unity	Snake	.05	T.	.52	T.								.18	.26	.03			.08	.26	.02													1.14
Vale	Malheur	.03		.23									.07	.25			.07	.09															0.74
Valley Falls	Southeast Drainage.	T.		.17								T.	T.				.03															0.20
Van	Malheur																																
Wallace Orchard	Willamette	.52	.17	1.33	.22	.10				.05	.06	T.	.12				T.	.18							T.								2.75
Walloupa	Grande Ronde	.41		1.30	.25									.02				.41	.02												.08		2.49
Wallowa	do	.35	.01	.89	.08									.08				.33	.03							.10					T.		1.87
Wamic	Deschutes																																
Warmspring	do			.10							T.	.52																					0.62
Wasco	Columbia		.10	.13	.40					T.	T.	.08	.12					.03															0.86
Welches	do	1.00	1.10	4.00	.70	.40	.06	.02		.04		T.	T.	.27			T.	1.02					.10	T.	.30	.10							9.81
Weston	Walla Walla	.40	.05	.70	.02	.10				T.				.05												.10					T.		1.42
Williams	Rogue.																																
Yonna	Interior Drainage	.03		.36							.02	.73	.05					.19															1.38

TABLE 3.—*Maximum and minimum temperatures at selected stations, October, 1910. District No. 12, Columbia Valley.*

Date.	Montana.						Idaho.																	
	Kalispell.		Missoula.		Afton, Wyo.		Boise.		Bonner's Ferry.		Hotspring.		Lewiston.		Mackay.		Meadows.		Pocatello.		Salmon.		Shoshone.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	63	46	69	44	74	30	74	47	69	40	78	45	81	46	70	35	73	39	77	47	78	33	72	38
2	63	41	64	41	69	.....	67	39	65	38	69	22	69	33	66	31	69	36	69	39	69	31	69	37
3	60	40	61	40	68	21	67	42	66	34	72	34	72	31	68	27	68	32	68	37	68	32	68	30
4	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
5	69	44	67	43	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
6	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
7	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
8	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
9	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
10	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
11	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
12	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
13	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
14	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
15	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
16	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
17	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
18	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
19	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
20	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
21	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
22	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
23	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
24	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
25	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
26	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
27	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
28	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
29	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
30	69	42	67	42	72	25	68	47	68	44	72	36	72	32	68	31	68	32	68	37	68	32	68	30
31	72	43	74	44	69	24	66	44	66	47	72	36	72	32	68	31	68	32	68	37	68	32	68	30
Mns	57.4	36.6	60.5	36.3	61.4	26.2°	66.3	40.7	60.2	35.1	70.6	36.1	66.0	43.4	62.5	30.4	62.1	29.9	64.9	37.5	65.6	28.2	64.9°	35.6°

Date.	Washington.																							
	Aberdeen.		Blaine.		Colville.		Kosmos.		Lakeside.		North Head.		North Yakima.		Odessa.		Port Crescent.		Seattle.		Sixprong.		Spokane.		Tacoma.		Tatoosh Island.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	64	55	60	50	58	43	55	45	66	47	57	46	67	55	55	40	56	46	55	46	72	54	60	44	64	47	56	50
2	61	56	58	51	63	38	54	43	66	43	54	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
3	55	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
4	60	49	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
5	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
6	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
7	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
8	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
9	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
10	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
11	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
12	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
13	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
14	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
15	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
16	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
17	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
18	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
19	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
20	60	50	60	46	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
21	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
22	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
23	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
24	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
25	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
26	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
27	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
28	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
29	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
30	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
31	57	50	55	44	58	32	54	40	66	43	56	46	66	56	56	41	56	46	56	46	68	56	60	46	66	49	56	48
Mns	59.0	45.5	57.0	43.5	62.2	34.6	61.3	42.3	62.4	43.1	55.6	49.5	66.8	40.4	65.1	37.3	54.1	41.6	57.7	47.8	67.5	44.8	60.2	41.3	58.7	46.5	54.5	47.9

TABLE 3.—*Maximum and minimum temperatures at selected stations for October, 1910. District No. 12*—Continued.

Date.	Walla Walla, Wash.		Oregon.																					
			Ashland.		Baker City.		Eugene.		Gold Beach.		Hermiston.		Marshfield.		Portland.		Prineville.		Roseburg.		The Dalles.		Vale.	
	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.
1	65	50	72	40	.....	.....	78	54	65	52	80	45	65	53	64	51	73	.....	65	42	73	54	71	36
2	62	46	60	39	.....	.....	65	43	61	38	69	51	62	38	56	50	72	.....	65	37	62	45	67	32
3	63	50	58	40	.....	.....	61	50	59	54	63	48	60	52	62	54	59	.....	62	49	63	50	59	50
4	60	52	59	41	.....	.....	58	50	63	50	73	43	62	49	58	52	55	.....	61	45	66	46	60	43
5	72	54	72	47	.....	.....	58	52	70	53	63	43	72	53	70	55	70	.....	74	53	70	52	55	31
6	76	53	77	47	.....	.....	72	54	69	49	78	40	70	58	70	60	80	.....	73	54	73	48	61	35
7	72	58	78	46	.....	.....	73	54	70	45	76	51	74	47	71	56	80	36	79	52	73	54	77	34
8	80	54	89	47	.....	.....	79	52	69	47	84	42	72	47	75	54	85	35	79	49	78	50	81	35
9	77	54	65	46	.....	.....	80	53	63	49	79	46	59	55	55	52	75	33	69	48	71	53	88	34
10	68	50	65	50	.....	.....	72	50	56	50	59	39	54	50	59	50	66	35	55	51	66	49	83	34
11	68	48	60	46	.....	.....	56	49	54	49	71	40	52	48	59	50	66	34	53	50	70	45	84	35
12	67	51	63	36	.....	.....	51	49	52	47	71	45	54	48	61	49	60	37	57	47	64	52	76	32
13	63	49	57	43	.....	.....	61	45	59	36	67	39	62	39	59	46	60	27	60	42	63	41	65	35
14	69	46	57	37	.....	.....	63	44	68	40	69	42	68	39	66	50	64	29	64	41	68	48	71	32
15	71	43	64	41	.....	.....	68	45	66	43	74	31	79	39	74	50	73	27	66	44	70	40	67	35
16	70	44	67	41	.....	.....	68	42	60	43	74	31	64	49	60	47	70	29	62	43	67	38	78	38
17	66	52	63	51	.....	.....	64	50	60	53	71	50	61	56	65	56	69	47	68	47	70	54	65	37
18	66	49	63	41	.....	.....	65	48	62	43	71	52	67	49	65	53	64	36	67	42	69	52	66	34
19	61	40	72	46	.....	.....	65	40	71	45	65	32	79	43	69	50	70	27	70	43	67	40	67	31
20	67	41	69	45	.....	.....	70	42	60	41	68	32	59	44	62	47	73	29	68	43	68	40	66	23
21	69	42	70	43	.....	.....	66	41	53	43	71	53	53	45	52	44	74	27	65	43	68	38	64	22
22	62	46	58	44	.....	.....	58	36	60	42	68	56	60	42	57	45	64	30	62	41	64	49	65	24
23	61	44	59	36	.....	.....	64	42	57	35	62	34	62	35	56	44	68	24	63	38	63	41	60	25
24	71	53	68	39	.....	.....	69	44	64	42	75	50	67	38	69	52	75	29	68	37	72	49	65	28
25	63	44	68	41	.....	.....	74	49	68	48	72	49	61	49	61	43	70	33	61	44	65	55	69	34
26	54	35	68	50	.....	.....	60	32	75	39	62	25	68	37	59	40	57	18	52	35	58	32	60	32
27	52	27	74	54	.....	.....	63	32	66	39	54	17	78	44	60	48	60	15	60	35	55	26	62	16
28	54	32	70	45	.....	.....	65	31	53	39	51	17	57	35	66	50	74	15	70	36	55	26	58	15
29	65	36	62	44	.....	.....	65	36	55	45	67	24	52	46	55	43	72	23	65	38	59	30	61	15
30	62	40	78	44	.....	.....	64	37	59	39	67	32	63	45	60	49	70	36	58	42	63	46	70	22
31	60	48	63	43	.....	.....	64	38	57	37	67	48	61	34	60	49	62	37	52	40	66	48	71	21
Means	65.7	46.2	66.7	43.6	.....	.....	65.8	44.6	62.1	44.4	69.1	40.2	63.8	45.4	62.4	49.6	68.7	30.0	64.3	43.6	66.4	44.9	68.1	30.6

WEATHER, FORECASTS, AND WARNINGS FOR THE MONTH.

By EDWARD H. BOWIE, in charge of Forecast Division.

Deep barometric depressions were observed in the region of Iceland and the British Isles from the 1st to 5th, followed by an exceptionally rapid rise to abnormally high pressure in the latter region from the 3d to 5th; another depression of pronounced character covered these regions on the 9th to 11th, following which date the pressure was near or above the normal until the close of the month. Low pressure prevailed after the 20th over southern Europe, and on the 24th and 25th a decided fall set in and a storm of hurricane intensity prevailed over the Mediterranean Sea. Over the Eurasian Continent, well-defined storm areas passed eastward from the 6th to 12th and the 19th to 25th. An area of low barometric pressure of great magnitude covered Siberia on the 17th and 18th. The area of high barometric pressure over the middle latitudes of the Atlantic Ocean was of less than normal development, except during the first week of the month. In the Bering Sea area pressure was below normal from the 1st to 6th, 12th to 16th, 19th to 25th, and 27th and 28th, and near or above the normal during other parts of the month.

In the United States the temperature averaged near or above the normal in all districts, the only extensive cold wave occurring from the 27th to 30th, when freezing temperatures prevailed nearly to the Gulf coast and killing frost occurred in all interior districts east of the Rocky Mountains and light frost as far south as northern Florida. The month, as a whole, was one of much sunshine, favorable temperature, and sufficient rain, although droughty conditions continued in portions of the Middle Atlantic and New England States and over the Great Plains from Texas to North Dakota. Excessive rains occurred over the Southeastern States and in the Ohio and middle Mississippi valleys.

The month opened with continued low pressure over the Bering Sea area and its extension southeastward into Alberta, Canada. Warm and generally clear weather prevailed over the United States, except on the north Pacific coast, where there was rain.

The following special forecast was issued Sunday, October 2:

An extensive barometric depression from Alaska has overspread the interior of the West, and its eastward movement will be attended by rains that will cover the Northwest Sunday and Sunday night, extending Monday and Tuesday over the greater portion of the corn belt and the upper Lake region, Tuesday and Wednesday over the Ohio Valley and the lower Lake region, and Wednesday or Thursday over the Middle Atlantic States and New England. The rains will probably not be prolonged beyond one day over the districts affected, and no other rains of consequence are indicated during the week, except in the Northwest, where another period of low pressure and unsettled weather is likely to set in after the middle of the week. The week will open with higher temperature in the Ohio and Mississippi valleys and by Tuesday the warm weather will reach the Eastern States. There will be a return to somewhat more seasonable conditions after the indicated rains, but, on the whole, temperature over the country will be above the normal during the week.

A disturbance that was crossing the Caribbean Sea during the last week of September entered the Gulf of Mexico by way of the Yucatan Channel on October 1, following which date this disturbance persisted for a number of days as a shallow depression over the Gulf of Mexico, and gave rise to heavy rains along the Gulf and south Atlantic coasts. The western disturbance advanced eastward as forecast and the morning of the 3d it was charted as a trough of low pressure extending from the upper Lake region southward to Texas, attended by showers. On the 4th the area of low pressure extended from the Great Lakes southward to the west Gulf States and rains were falling in the upper Lake region and the Mississippi and Ohio valleys. Very heavy rains fell on that date, the 4th, in the lower Ohio Valley, and high temperatures for the season continued in the eastern districts. This disturbance continued to move slowly eastward and reached the Atlantic coast on the 6th, causing rains that materially relieved the droughty conditions over the greater portion of the Atlantic coast region. Following this disturbance, there was a secondary development over the Gulf of Mexico and rains continued until the close of the week in the South Atlantic and east Gulf States. High temperatures preceded these rains in the Eastern States, but these gave way to much colder weather on the 7th, when cool weather was general except in the Northwest. There were frosts the morning of the 6th in the Plains States and the upper Mississippi Valley and on the 7th and 8th over the Lake region, New York, and New England.

The following forecast for the week beginning the 10th was issued on the 9th:

The prevailing high pressure over the interior districts east of the Rocky Mountains indicates that clear weather will predominate over the eastern half of the country during the coming week, except in the South Atlantic and east Gulf States, where showery weather will continue for a day or two owing to unsettled conditions over the Gulf of Mexico. Moderate temperature will rule, with, however, a rising tendency after the middle of the week.

Alaskan observations are missing, but Saturday's observations, coupled with the present pressure distribution over the Northwest, presage a week of generally fair weather over the West, although with some possibility of unsettled conditions Monday or Tuesday in the extreme Northwest, accompanied by falling temperature. Over the Central West it will be somewhat warmer early in the week, followed by a change to cooler weather after Wednesday.

Generally fair weather prevailed during the week, beginning the 10th until the 16th in the districts east of the Rocky Mountains except in the Southern States, where there were rains beginning on the 12th; west of the Rocky Mountains, rains occurred generally from the 11th to 13th, followed by fair weather.

THE WEST INDIAN HURRICANE OF OCTOBER, 1910.

Although the pressure was below the normal several days previously to the 12th over the Caribbean Sea, the first intimation of a disturbance of decided intensity in that region was received by wireless telegraph the evening of the 12th from the steamship *Abangarez*. This report read as follows:

Steamship *Abangarez*, bound south, midnight of 11th, weather threatening, wind variable, northeast to northwest; heavy rain; barometer 29.40 (?) and falling. 3 a. m., barometer 29.38, heavy rain squalls from west-southwest, hurricane force. 4 a. m., barometer 29.30, rising, wind west-southwest, force 11. 8 a. m., barometer 29.50, wind steady with rain, west-southwest, force 1. Latitude midnight, 15° 4′ north, and longitude, 82° 5′ west. 8 a. m., latitude, 14° 20′ north, and longitude, 81° 51′ west.

This observation, coupled with those from the West Indian stations, located the disturbance very exactly. By the morning of the 13th this storm had advanced northwestward and was apparently central about 200 miles south-southwest of Havana moving north-northwest, and the following advisory warning was issued to shipping on the Gulf and Atlantic coasts:

Tropical storm of considerable intensity southwest of Cuba near Yucatan Channel, moving toward Gulf of Mexico. Caution advised for vessels in those waters.

Later in the day northeast storm warnings were ordered for southern Florida. On the morning of the 14th the center of the hurricane was approaching southern Cuba and on the evening of that date, it was apparently central near and northwest of Havana, where at 7 p. m., the pressure was 29.04 inches, with a maximum wind velocity of 88 miles an hour from the south. The conditions on the morning of the 14th were threatening and the storm warnings on the southern Florida coast were changed to hurricane warnings, which were extended northward to include central Florida; and later in the day storm warnings were extended northward to Jacksonville and westward to New

Orleans. The following information was given to shipping interests from Galveston to Boston:

Hurricane in Gulf of Mexico west of Florida Keys and north of western Cuba, moving north-northwestward. Movement of storm will be attended by dangerous gales. Storm apparently of great energy and wide extent. Vessels bound for danger zone should be fully advised.

Vessel masters were advised by all means available, including the dissemination of warnings by wireless telegraphy, that the storm was of marked intensity and that it would be unsafe for them to venture into the Gulf of Mexico and Cuban waters.

During the 15th and 16th the center of the hurricane apparently moved northwestward over the Gulf and the winds over Cuba and Florida moderated, although still high and the pressure rose somewhat. Wireless observations from vessels during these days showed high winds over the Gulf of Mexico and press reports were to the effect that phenomenally high tides wrought considerable destruction to property on the south shores of the Gulf of Mexico on the 15th and 16th. On the 16th the center of the disturbance was apparently a considerable distance west of Key West and losing intensity; warnings were continued, however, on the east coast of the Gulf of Mexico and on the Atlantic coast northward to Savannah.

A second fall in pressure set in over the western Caribbean Sea on the 16th, and on the night of that day another storm of greater intensity than that which immediately preceded it passed northward over Cuba, attended by the destruction of much property and the loss of a number of lives. At 1 a. m. of the 17th hurricane warnings were ordered displayed by the observer at Key West, and later at 9:30 on the morning of the 17th hurricane warnings were extended to all of Florida, except west of the Apalachicola River, also northward on the Atlantic coast to Norfolk. The following cautionary advice was sent to all other Atlantic and Gulf ports:

A tropical disturbance of great intensity is centered this morning close to and west of Havana. This storm is probably a different one from the storm which reached the east Gulf region last Friday. The earlier one apparently having moved westward into the Gulf of Mexico. Dangerous gales reaching hurricane force are indicated for the east Gulf region and the southern portion of the South Atlantic during the next 24 hours. All vessels should be fully advised.

The center of this storm passed over or near Key West during the afternoon of the 17th and continued to move in a northerly direction until it reached southern Georgia. Its later path inclined more to the east, and it passed off the coast near Cape Hatteras on the 20th.

This storm was very destructive to property in Cuba and the Florida Peninsula and on the Georgia and South Carolina coasts. A number of vessels at sea, not equipped for communication by wireless telegraphy, were wrecked and a number of lives lost. The warnings issued by the Bureau were timely and resulted unquestionably in saving many lives and much property. A detailed description of the hurricane, and the resulting damage and loss of life therefrom is to be found elsewhere in this number of the REVIEW.

The following are comments made on the work of the Weather Bureau in connection with this storm.

Letter from C. W. Jungen, Manager of the Atlantic Steamship lines of the Southern Pacific Company:

I beg to express to you the appreciation of the management of this company for the valuable service rendered by the Weather Bureau during the tropical storm in the Gulf of Mexico and the Atlantic Ocean on or about the 13th to 19th instant, which overtook several of the company's ships in that vicinity. These bulletins were of great assistance to the masters of our ships in preserving the company's property and preventing the loss of life at sea.

Letter from Senator Duncan H. Fletcher of Florida:

Permit me to say I have always appreciated the value of the Weather Bureau to the country and the service rendered before and during the recent hurricane has further emphasized its indispensability to Florida.

Editorial from Tampa Morning News of October 20:

That there was no loss of life during the storm is largely due to the efficiency of the Weather Bureau in warning mariners.

Extract from a letter dated November 9, from J. R. Brown, President of the Florida East Coast Railway:

I am pleased to express our appreciation of the excellent service rendered by the Weather Bureau through your office during the past season, and the frequent advisory warnings sent down the line during the approach of the recent hurricane. The information thus furnished, I am advised, enabled us to get practically all our large fleet of floating equipment into hurricane harbors, thus making our loss in this respect comparatively light. We were also enabled to get our scattered forces of about 1,500 men into safe locations so that there was no loss of life. By use of hurricane flags, rockets, and signal whistles we were enabled to warn the inhabitants of the keys, the fishing fleet in the locality of our work, as also two steamships anchored at Knights Key Harbor. Had we depended on the barometer we would not have been able to secure one-half of our floating plant before the storm was upon us.

Extract from an editorial in the Florida Times-Union, Jacksonville, Fla., of October 30:

Considering our own State alone, it is impossible to estimate what the weather service has done for Florida. * * * We have recently passed through a storm as severe as any that ever swept this State. Hundreds of men were working on the east coast extension on the Florida keys in the most exposed situation conceivable. The Weather Bureau sent out its warnings and the men went to places of safety and not a single life was lost, where, but for the warnings, thousands would have been drowned. * * *

Editorial from the Chieftain, Pueblo, Colo., October 19:

The modern system of weather reports, predictions, and signals undoubtedly has saved hundreds of lives and millions of property in the recent terrible southern storm.

Editorial from the Savannah, Ga., Morning News of October 26:

Yet it (the storm) might have been worse; and it probably would have been a great deal worse, except for the timely warnings sent out by the Federal Weather Bureau.

Editorial from the Vicksburg, Miss., Herald of October 19:

There can be no question that a grave calamity has befallen Cuba and the Florida Peninsula as well. The one gratifying circumstance in it is the proof furnished of the infinite value of the Weather Bureau warnings, which gave ample time for all shipping to seek shelter in safe anchorage.

From the 10th to the 16th, inclusive, except in the region traversed by the hurricane hereinbefore referred to the weather over the country was generally fair, except in the Pacific States where rains were frequent and caused some damage in the raisin districts of California, although, as stated in an editorial from the California Fruit Grower of October 15, "warnings were received in time and the trays mostly all stacked."

Frosts occurred on the 10th in the upper Lake region and on the 13th in the interior of New England and New York and in northeastern Pennsylvania.

A disturbance developed in the extreme Northwest on Thursday, the 20th, and on the 21st was over the upper Mississippi Valley, whence it moved northeastward across the Great Lakes, attended by brisk south shifting to west winds, and rains from the Mississippi Valley to the Atlantic coast. Advisory warnings of brisk and high winds were issued for the Great Lakes on the 21st, and on the morning of the 22d storm warnings were issued for Ontario and extreme eastern portion of Lake Erie. On the 18th and 19th an extensive area of high barometric pressure formed in the Northwest, from which region it advanced southeastwardly and caused much lower temperatures on these days in the northern Plains States and the Rocky Mountain region and later over the southern Plains, the Mississippi Valley, and the East. Snow fell on the eastern slope of the Rocky Mountains on the 19th and 20th as far south as the Texas Panhandle. On the 21st frosts occurred in the southern Plains States and the interior of the west Gulf States, and on the 22d in the Mississippi Valley, the Lake region, and Ohio Valley, and again in the west Gulf States. On the 21st and 22d frosts extended to the Middle South as far east as the western portion of North Carolina. These were forecast on the mornings of the

20th and 21st. On the 22d frost warnings were issued for the east Gulf States, Tennessee, the Ohio Valley, and the interior of the Middle Atlantic States, and again on the 23d for these regions.

A disturbance appeared in the Northwest on the 23d, was central over the upper Mississippi Valley on the 24th in the lower Lake region on the 25th and off the Maine coast on the 26th, being attended during its eastward movement by rains in the Lake region and the North Atlantic States. This disturbance was followed by the last of a series of low barometer areas, having their origin in a deep depression in Alaska and the Bering Sea area. Its center was in the extreme Northwest on the 25th, over the lower Missouri Valley on the 26th, and over the Great Lakes on the 27th. It was attended by rains in the North Pacific States and over the Northern and Middle States from the Missouri Valley to the Atlantic coast and high winds on the Great Lakes on the 27th, for which storm warnings were issued on the 26th. On the 27th warnings were issued for the Atlantic and Gulf coasts, except southern Florida. This disturbance was followed by a decided rise in pressure and a cool wave appeared in the Northwest on Wednesday, the 26th, which quickly overspread the Plains States and the Rocky Mountain region and the Mississippi Valley during Wednesday night and thence advanced to the Atlantic States, attended by considerably lower temperature. General frosts occurred in connection with this high pressure area, except in central and southern Florida.

Average relative humidity and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	75	− 4	Missouri Valley	63	− 4
Middle Atlantic	75	− 1	Northern slope	61	+ 1
South Atlantic	80	+ 2	Middle slope	54	− 5
Florida Peninsula	82	+ 2	Southern slope	58	− 5
East Gulf	74	+ 1	Southern Plateau	43	+ 1
West Gulf	68	− 4	Middle Plateau	52	+ 3
Ohio Valley and Tennessee	73	+ 2	Northern Plateau	56	− 7
Lower Lakes	75	+ 1	North Pacific	84	+ 4
Upper Lakes	78	0	Middle Pacific	65	− 5
North Dakota	69	− 3	South Pacific	68	− 2
Upper Mississippi Valley	72	+ 1			

Maximum wind velocities.

Stations.	Date.	Velocity.	Direction.	Stations.	Date.	Velocity.	Direction.
Block Island, R. I.	23	54	nw.	Nantucket, Mass	27	54	sw.
Do	26	50	nw.	New York, N. Y	23	50	nw.
Buffalo, N. Y	27	60	w.	North Head, Wash	2	76	se.
Canton, N. Y	27	60	sw.	Do	3	72	se.
Charleston, S. C	18	52	e.	Do	4	62	se.
Do	19	68	e.	Do	16	56	se.
Cleveland, Ohio	27	54	w.	Do	17	62	se.
Jacksonville, Fla	18	56	ne.	Oklahoma, Okla	26	50	n.
Jupiter, Fla	17	58	se.	Point Reyes Light, Cal	1	72	nw.
Do	18	70	s.	Do	2	52	nw.
Key West, Fla	14	50	se.	Do	4	60	nw.
Do	17	100	s.	St. Paul, Minn	18	50	sw.
Do	18	60	sw.	Savannah, Ga	18	60	e.
Memphis, Tenn	13	72	sw.	Do	19	70	ne.
Mount Tamalpais, Cal	1	72	nw.	Tatoosh Island, Wash	5	53	s.
Do	3	54	nw.	Do	6	60	s.
Do	4	54	nw.	Do	7	68	se.
Do	17	52	nw.	Do	8	63	se.
Do	18	50	ne.	Do	26	56	ne.
Mount Weather, Va	25	52	w.	Do	27	60	ne.

Average temperatures and departures from the normal.

Districts.	Number of stations.	Average temperatures for the current month.	Departures for the current month.	Accumulated departures since January 1.	Average departures since January 1.
		°	°	°	°
New England	12	52.5	+ 2.0	+15.4	+ 1.3
Middle Atlantic	15	58.1	+ 2.7	+13.8	+ 1.4
South Atlantic	10	66.6	+ 2.9	+ 7.2	+ 0.7
Florida Peninsula*	8	73.6	+ 0.3	− 2.2	− 0.2
East Gulf	11	67.8	+ 2.1	0.0	0.0
West Gulf	10	67.1	+ 0.8	+ 9.4	+ 0.9
Ohio Valley and Tennessee	13	60.4	+ 3.3	+ 5.2	+ 0.5
Lower Lakes	10	53.5	+ 1.9	+ 8.6	+ 0.9
Upper Lakes	12	51.2	+ 3.6	+22.2	+ 2.2
North Dakota*	9	49.5	+ 5.2	+27.3	+ 2.7
Upper Mississippi Valley	14	56.6	+ 3.7	+13.8	+ 1.4
Missouri Valley	11	57.8	+ 4.7	+20.0	+ 2.0
Northern slope	10	49.8	+ 5.1	+24.7	+ 2.5
Middle slope	6	58.8	+ 3.2	+21.0	+ 2.1
Southern slope*	8	62.8	+ 0.6	+15.9	+ 1.6
Southern Plateau*	12	51.0	+ 1.5	+16.0	+ 1.6
Middle Plateau*	10	49.8	+ 1.7	+14.5	+ 1.4
Northern Plateau*	9	51.2	+ 2.6	+11.0	+ 1.1
North Pacific	7	52.4	+ 1.3	− 1.6	− 0.2
Middle Pacific	5	61.2	+ 1.7	− 2.4	− 0.2
South Pacific	4	65.5	+ 3.2	+12.8	+ 1.3

*Regular Weather Bureau and selected cooperative stations.

Average precipitation and departures from the normal.

Districts.	Number of stations.	Average.		Departure.	
		Current month.	Percentage of normal.	Current month.	Accumulated since Jan. 1.
		Inches.		Inches.	Inches.
New England	11	1.90	53	− 1.7	− 5.7
Middle Atlantic	15	3.20	100	0.0	− 4.5
South Atlantic	11	7.96	100	0.0	− 5.3
Florida Peninsula*	8	10.00	208	+ 5.2	− 5.1
East Gulf	11	3.46	125	+ 0.7	− 5.5
West Gulf	10	3.31	122	+ 0.6	− 5.4
Ohio Valley and Tennessee	13	4.23	161	+ 1.6	+ 1.0
Lower Lakes	10	3.46	117	+ 0.5	− 1.3
Upper Lakes	12	2.28	79	− 0.6	− 5.5
North Dakota*	9	0.44	47	− 0.5	− 6.6
Upper Mississippi Valley	15	1.82	75	− 0.6	− 7.4
Missouri Valley	11	1.08	55	− 0.9	− 3.5
Northern slope	9	0.67	69	− 0.3	− 2.8
Middle slope	6	0.47	30	− 1.1	− 6.4
Southern slope*	8	1.62	84	− 0.3	−10.1
Southern Plateau*	12	0.39	49	− 0.4	− 2.9
Middle Plateau*	11	1.32	143	+ 0.4	− 3.3
Northern Plateau*	9	1.16	100	0.0	− 2.4
North Pacific	7	4.73	117	+ 0.7	− 3.2
Middle Pacific	7	0.51	36	− 0.9	− 7.1
South Pacific	4	0.73	89	− 0.1	− 4.8

*Regular Weather Bureau and selected cooperative stations

Average cloudiness and departures from the normal.

Districts.	Average.	Departure from the normal.	Districts.	Average.	Departure from the normal.
New England	5.3	− 0.1	Missouri Valley	3.0	− 1.1
Middle Atlantic	4.1	− 0.7	Northern slope	4.2	− 0.2
South Atlantic	3.4	− 0.6	Middle slope	3.0	− 0.4
Florida Peninsula	5.4	+ 0.7	Southern slope	3.3	− 1.3
East Gulf	3.7	− 0.2	Southern Plateau	2.2	0.0
West Gulf	3.1	− 0.6	Middle Plateau	3.2	− 0.1
Ohio Valley and Tennessee	3.7	− 0.7	Northern Plateau	4.8	+ 0.2
Lower Lakes	5.1	− 0.8	North Pacific	7.3	+ 1.0
Upper Lakes	5.4	− 0.6	Middle Pacific	4.1	+ 0.3
North Dakota	4.6	− 2.6	South Pacific	2.8	− 0.3
Upper Mississippi Valley	3.5	− 1.1			

RIVERS AND FLOODS.

By Prof. H. C. FRANKENFIELD, in charge River and Flood Division.

During the first half of the week beginning Sunday, October 2, general low pressure prevailed over the interior of the country and a decided high area over the Atlantic States and the North Atlantic Ocean. Heavy rain set in over the lower Ohio Valley during the night of Monday, October 3, and continued until the night of Thursday, October 6. During October 5 and 6 the heavy rains extended northeastward into the upper Lake region, but were not excessive east of the State of Ohio. The greatest rainfall reported from river stations was 10.95 inches at Cairo. Ill., and 10.88 inches at Evansville, Ind., while between the two places as much as 15 inches was reported. As a whole, the rainfall was greatest over the watershed of the Wabash River, although above Evansville through the States of Indiana, Kentucky, and Ohio the fall ranged from 4 to 7 inches. The normal dry season and the antecedent low-water conditions operated to prevent a flood in the Ohio River, and the highest stage reported was 26.8 feet at Cairo, on October 11, 18.2 feet below the flood stage. At Evansville the highest stage reached was 25.8 feet. The northern tributaries of the Ohio River, however, and the interior rivers, generally, of the States of Ohio and western Kentucky soon responded to the unusual conditions and the resulting floods were widespread and destructive.

Damage to railroads, bridges, etc., was of the usual character and was very heavy, but the greatest losses were occasioned by the destruction of standing crops, especially of corn in the shock. The estimated losses were between $3,000,000 and $3,500,000. Detailed accounts of the floods will be found in another portion of this REVIEW.

Warnings were first issued on October 6, and thereafter until the waters began to subside. Flood stages were first reached during the night of October 6–7.

There were no other floods during the month.

Very low stages prevailed over the greater portion of the Arkansas River, and at Wichita, Kans., and Little Rock, Ark., the lowest stages of record were reached. At Wichita the lowest stage was 4.3 feet below zero from October 23 to 31, inclusive, and at Little Rock, zero on October 31, with a further fall indicated.

The recent completion of Dam No. 6, on the Cumberland River, about 90 miles from Nashville, marks an epoch in the history of the navigation of the Cumberland River. Lock No. 7 was also completed a short time ago, and the effect of the entire series of eight dams is the all-the-year maintenance of a stage of from 6 to 6.5 feet of water from Lock A, about 41 miles below Nashville, to a point just above Carthage, Tenn., a total distance of about 166 miles. A list of the locks and dams follows:

Designation.	Put in operation.	Distance from Nashville.
Lock A	November 24, 1904	41.4 miles below.
Lock No. 1	November 26, 1904	2.6 miles below.
Lock No. 2	October 9, 1907	0.0 miles above.
Lock No. 3	October 15, 1908	26.0 miles above.
Lock No. 4	November 17, 1909	44.8 miles above.
Lock No. 5	October 18, 1909	72.0 miles above.
Lock No. 6	October 21, 1910	89.6 miles above.
Lock No. 7	October 18, 1910	106.6 miles above (9.2 miles below Carthage).

Hydrographs for typical points on several principal rivers are shown on Chart I. The stations selected for charting are Keokuk, St. Louis, Memphis, Vicksburg, and New Orleans, on the Mississippi; Cincinnati and Cairo, on the Ohio; Nashville on the Cumberland; Johnsonville, on the Tennessee; Kansas City, on the Missouri; Little Rock, on the Arkansas; and Shreveport, on the Red.

SPECIAL PAPERS ON GENERAL METEOROLOGY.

RECENT ADDITIONS TO THE WEATHER BUREAU LIBRARY.

C. FITZHUGH TALMAN, Librarian.

The following have been selected from among the titles of books recently received, as representing those most likely to be useful to Weather Bureau officials in their meteorological work and studies. Anonymous publications are indicated by a ——.

Azores. Service météorologique.
Résumé d'observations. 1909. Lisbonne. 1910. 17p. ob. 4°.

Bologna. Osservatorio della R. università.
Osservazioni meteorologiche. 1909. Bologna. 1910. 31p. f°.

Bradtke, Franz.
Stehende Seespiegelschwankungen (Seiches) beobachtet am Lagower See und Tschetschsee in der Mark. Halle a/S. 1910. 92p. 8° (Inaug.-Diss.—Halle-Wittenberg.)

Briggs, Lyman J. & Belz, J. O.
Dry farming in relation to rainfall and evaporation. Washington. 1910. 71p. 8°. (U. S. Bureau of plant industry, bull. 188.)

Coimbra. Observatorio meteorologico.
Observações meteorologicas e magneticas. 1909. Coimbra. 1910. viii, 157p. f°.

Colombo (Ceylon). Observatory.
Report. 1909. [Colombo.] [1910.] viii, 50p. f°.

Costanzo, G. & Negro, C.
Meteorologia agricola. Milano. 1911. xi, 200p. 24°.

Deluc, J[ean] A[ndré].
Recherches sur les modifications de l'atmosphère, contenant l'histoire critique du baromètre, & du thermomètre, ... Nouvelle édition. Paris. 1784. 4v. 8°.

Gorczyński, Wladislaw.
Sur la valeur de la "constante solaire" d'après les mesures prises à Ursynów (Pologne) en été 1909. Varsovie. 1910. 8°. (Extr., C–r., Soc. sci. Varsovie, Cl. sci-math et nat., 3. Année, 1910, p. 130–145.)

O przebiegu rocnym i dziennym usloneczнienia w Krakowie. Sur la marche annuelle et diurne de la durée de l'insolation à Cracovie. [Résumé in French.] Warszawa. 1910. 8°. (Extr., C–r., Soc. sci. Varsovie, Cl. sci-math et nat., 3. Année, 1910, p. 162–178.)

Günther, Siegmund.
Ein Beitrag zur Vorgeschichte der modernen Gewitterkunde. München. 1910. 22p. 8°. (S-A., Sitzber. K. Bay. Akad. Wiss., Math.-phys. Kl., Jhrg. 1910, Abh. 4.)

Hands, Alfred.
Lightning and the churches. London. 2d. ed. 1910. 92p. 8°.

Harts, W. W.
Forestry and stream flow. (*In* Proc. eng. assoc. south, 1910, 21:20–46.)

International catalogue of scientific literature.
F. Meteorology including terrestrial magnetism. 7th. Annual issue, 1907. London. 1909. viii, 284p. 8°.

International council for the study of the sea.
Bulletin hydrographique pour l'année juillet 1908–juin 1909. Copenhague. [1910.] v. p. f°.

Ninth international geographical congress.
Comptes-rendu... publié... par Arthur de Claparède. Genève. 1909–1910. 2v. 8°.

Internationale Luftschiffahrts-Ausstellung (ILA).
Denkschrift der Isten... zu Frankfurt a/M. Bd.I. Wissenschaftliche Vorträge. Berlin. 1910. [8], 293p. 4°.

[Imperial academy of sciences of Saint Petersburg.]
Protokoly zasîdanïĕ vtorogo meteorologicheskago s"ïezda pri Imperatorskoi akademïi nauk, 11–17 ïanvarïa, 1909 g. [Protocol of the sessions of the 2d. meteorological congress under the imperial academy of sciences, January 11–17, 1909.] Sanktpeterburg. 1910. viii, 344p. 4°.

Japan. Central meteorological observatory.
Annual report, 1908, Pt. I. Tokio. 1910. 387p. 4°.

Jurva, Risto.
Öfver åskvädren i Finland, 1905. Helsingfors. 1910. 168p. 8°. (Bidrag till Kännedom af Finlands Natur och Folk. H. 68, No. 1.)

Lockyer, William J. S.
Southern hemisphere surface-air circulation: Being a study of the mean

monthly pressure amplitudes, tracks of anticyclones and cyclones, and the meteorological records of several antaretic expeditions. London. 1910. iii, 109p. f°. (London. Solar physics observatory.)

Madrid. Observatorio de Madrid.
Observaciones meteorológicas . . 1902–1905. Madrid. 1910. xx, 611p. 8°.

Prussia. Landesanstalt für Gewasserkunde.
Jahrbuch . . . 1906. Berlin. 1910. v. p. f°.
Same. 1907. Berlin. 1910. v. p. f°.
Same. Besondere Mitteilungen. Bd. 2, Hft. 2. Berlin. 1910. 41p. f°.

Russia. [Hydrographic office.]
Sbornik gidro-meteorologicheskikh nabliudenii . . . Vypusk 7. 1904, 1905, 1906 g. Sanktpeterburg. 1909. xxxiv, 500p. 4°.
Same . . . Vypusk 8. 1907, 1908 g. Sanktpeterburg. 1910. xxxi, 399p. 4°.

St. Ignatius college. Meteorological observatory.
Annual report. v. 15. 1909. Cleveland. n. d. n. p. 8°.

Sandström, J. W. & Helland-Hansen, B.
Ueber die Berechnung von Meeresströmungen. Bergen. 1903. 43p. 4°. (Rpt. Norwegian fishery- and marine-investigations. v. 2. 1902. No. 4.)

Smith, F. C.
Relation of climate to the treatment of pulmonary tuberculosis. Washington. 1910. 17p. 8°. (U. S. Publ. health and Marine-hospital serv. P. H. bull. 35.)

Société astronomique et météorologique de Port-au-Prince.
Bulletin annuel . . . Année 1909. Port-au-Prince. 1910. 3p. f°.

Tiflis. Physikalisches Observatorium.
Beobachtungen . . . 1899. Tiflis. 1909. 230p. f°.
Same. . . . 1900. Tiflis. 1909. 252p. f°.
Same. . . . 1901. Tiflis. 1909. 162p. f°.
Same. . . . 1902. Tiflis. 1909. 170p. f°.
Same. . . . 1903. Tiflis. 1909. 170p. f°.
Same. . . . 1904. Tiflis. 1909. 170p. f°.

Tsukubasan. [Observatory.]
Ergebnisse der meteorologische Beobachtungen, 1907. Tokio. 1910. 129p. f°.

Venice. Ufficio idrografico.
Le bureau hydrographique du "Magistrato alle Acque" de Venise. Venezia. 1910. 15p. 4°.

Yntema, Lambertus.
On the brightness of the sky and the total amount of starlight. An experimental study. Groningen. 1909. 62p. f°. (Inaug.-Diss.–Groningen.)

Zi-ka-wei. Observatoire magnétique et météorologique.
Bulletin des observations. T. 33, Année 1907. Fasic. A. Magnétisme terrestre. Changhai. 1910. 77p. f°.
The storms of August 1910. Shanghai. 1910. 24p. 8°.

RECENT PAPERS BEARING ON METEOROLOGY AND SEISMOLOGY.

C. FITZHUGH TALMAN, Librarian.

The subjoined titles have been selected from the contents of the periodicals and serials recently received in the Library of the Weather Bureau. The titles selected are of papers or other communications bearing on meteorology or cognate branches of science. This is not a complete index of the meteorological contents of all the journals from which it has been compiled; it shows only the articles that appear to the compiler likely to be of particular interest in connection with the work of the Weather Bureau. Unsigned articles are indicated by a ——.

Electrical world. New York. v. 56. 1910.
——Daylight and dark-day charts at Milwaukee. p. 1184. (Nov. 17.)
——Lightning phenomena under investigation at University of Illinois. p. 1215. (Nov. 24.) [Note on experiments to devise better protection of buildings against lightning.]

Geographical society of Philadelphia. Bulletin. v. 8. October, 1910.
Van Cleef, Eugene. Climatic influences in the economic development of Australia. p. 1–26.
Wilson, Lucy L. W. Climate and man in Peru. II. p. 27–45.

Japan. Central meteorological observatory. Bulletin. Tokio. 1910.
Okada, T. On the *bai-u* or rainy season in Japan. p. 1–82.

Korea. Meteorological observatory. Scientific memoirs. Chemulpo. v 1. 1910.
Mukasa, H. Die Organisation des Koreanischen meteorologischen Observatoriums. p. 1–16. [With list and map of stations, illustrations of weather and storm signals, and views of the central observatory.]
Hirata, T. Evaporation in Korea and south Manchuria. p. 1–21.
Wada, Y. Les pluviomètres du XV^e^ siècle. p. 1–4.

Nature. London. v. 85. 1910.
——Meteorological relationships. p. 55–56. (Nov. 10.) [Reviews certain investigations by H. H. Hildebrandsson and E. T. Quayle.]
Chree, C[harles]. Atmospheric electricity and rain. p. 80–81. (Nov. 17.)

Scientific American. New York. v. 103. Nov. 19, 1910.
——Earthlight. p. 394.
Boyer, Jacques. The new Dosne heliograph. p. 402–410. [Illustrated.]

Scientific American supplement. New York. v. 70. 1910.
Talman, C. Fitzhugh. The meteorological isograms. A rapidly growing family of curves descended from Alexander von Humboldt's "isotherms." p. 316–318. (Nov. 12.) [Illustrated.]
Crouzon, —. Physiological effects of altitude. A new field for investigation. p. 334. (Nov. 19.)
——Dew ponds. p. 346. (Nov. 26.)

Scottish meteorological society. Journal. Edinburgh. v. 15. 1909.
Carse, G. A. Atmospheric electricity. p. 143–149. [Sketch of methods and theories.]
Bell, Herbert. On the diurnal range of wind velocity at Blackford Hill observatory, Edinburgh. p. 149–154.
Dudgeon, R. F. Fifty years' rainfall at Cargen, near Dumfries. p. 155–157.
Richardson, Ralph. On the occurrence of great cold throughout Scotland during November and December, 1909, and January, 1910. p. 158–162.
Fairgrieve, M. McCallum. Research papers from the Meteorological office. p. 163–175.
——Anomalous readings of dry and wet thermometers. p. 177–179. [Suggests explanations of the wet-bulb reading higher than the dry.]
Jamieson, T. F. On the greatest frosts of the past sixty years [in Scotland.] p. 179–181.

Symons's meteorological magazine. London. v. 45. November, 1910.
Mossman, R. C. Meteorology at the international American scientific congress, Buenos Aires, July, 1910. p. 177–182. [Includes description of the Argentine meteorological service.]
——Casella's insulated rain gauge. p. 182–183.
——Heavy rainfall in Barbados. p. 186–187.

United States. Weather bureau. Meteorological chart of the North Atlantic ocean. January, 1911.
Humphreys, W[illiam] J[ackson]. Ocean currents—their relation to one another.

Archives des sciences physiques et naturelles. Geneve. Tome 30. 15 octobre 1910.
Drygalski, E. v. La glaciation des mers. Les conditions de son développement et les faits observés. p. 356–378.

9. Congrès international de géographie. Compte rendu. Genève. Tome 2. 1910.
Rudolph, E[mil]. Die Beziehungen zwischen den tektonischen und seismischen Verhältnissen Ostasiens. p. 201–213.
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CONDENSED CLIMATOLOGICAL SUMMARY.

In the following table are given, for the various sections of the Climatological Service of the Weather Bureau, the average temperature and rainfall, the stations reporting the highest and lowest temperatures with dates of occurrence, the stations reporting the greatest and least monthly precipitation, and other data, as indicated by the several headings.

The mean temperatures for each section, the highest and lowest temperatures, the average precipitation, and the greatest and least monthly amounts are found by using all trustworthy records available.

The mean departures from normal temperature and precipitation are based only on records from stations that have ten or more years of observations. Of course the number of such records is smaller than the total number of stations.

Temperature and precipitation by sections, October, 1910.

Station.	Temperature—in degrees Fahrenheit.							Precipitation—in inches and hundredths.					
	Section average.	Departure from the normal.	Monthly extremes.					Section average.	Departure from the normal.	Greatest monthly.		Least monthly.	
			Station.	Highest.	Date.	Station.	Lowest.	Date.			Station.	Amount.	Station.	Amount.
Alabama	66.7	+ 3.0	2 stations	98	1†	Riverton	21	29	3.20	+ 0.68	Spring Hill	9.73	Evergreen	0.30
Arizona	64.9	+ 0.9	Parker	110	7†	Flagstaff	16	21	0.27	− 0.35	Prescott	1.19	4 stations	0.00
Arkansas	62.9	+ 0.7	Lewisville	96	1	Bergman	16	29	5.19	+ 2.23	Marked Tree	16.01	Mena	1.67
California	61.9	+ 1.9	2 stations	108	8	Montague	15	28	0.83	− 0.78	Monumental	3.47	7 stations	0.00
Colorado	47.9	+ 2.4	Sheridan Lake	100	10	Hermit	−15	21	1.33	− 0.18	Cascade	6.77	6 stations	0.00
Florida	73.1	+ 0.6	Live Oak	95	3	Molino	27	30	8.74	+ 4.85	Hypoluxo	27.81	Marianna	2.15
Georgia	66.4	+ 2.4	8 stations	95	1†	2 stations	20	30	3.32	+ 0.64	Valona	8.96	Toccoa	1.22
Hawaii (September)	74.1	.....	Molokai Ranch	93	24	Humuula, Hawaii	39	6†	5.28	.....	Rhodes Garden	20.55	Waiopae Ranch	0.00
Idaho	48.2	+ 1.9	Glenns Ferry	94	10	Chesterfield	7	27	1.48	+ 0.23	Wallace	6.53	Springfield	0.12
Illinois	57.9	+ 3.4	Flora	97	2	2 stations	10	29	3.51	+ 1.17	Golconda	15.46	Dixon	0.54
Indiana	57.4	+ 2.8	Rome	92	1	Judyville	15	29	5.31	+ 2.98	Evansville	11.19	Huntington	1.81
Iowa	55.2	+ 3.3	2 stations	93	10†	Woodburn	10	29	0.77	− 1.58	Fort Dodge	1.73	Chariton	T.
Kansas	59.9	+ 2.7	2 stations	98	1†	Blakeman	10	28	0.60	− 1.54	Oswego	3.29	Goodland	0.00
Kentucky	61.4	+ 3.5	Lynnville	96	2	Beattyville	17	30	4.45	+ 2.36	Blandville	11.15	Middlesboro	1.22
Louisiana	69.1	+ 1.8	Liberty Hill	100	1	2 stations	21	29	3.14	+ 0.43	Sugartown	7.00	Liberty Hill	0.87
Maryland and Delaware	59.4	+ 3.7	College Park, Md	92	1	2 stations, Md	15	30	3.56	+ 0.55	Seaford, Del	8.26	Westernport, Md	0.98
Michigan	51.6	+ 3.1	Concord	93	14	Ishpeming	8	29	2.50	− 0.21	Cheboyan	5.81	Detroit	1.07
Minnesota	50.8	+ 5.2	Beardsley	94	2	Long Prairie	11	23	0.97	− 1.32	International Falls	3.47	West Concord	0.12
Mississippi	66.5	+ 2.2	2 stations	96	2†	Holly Springs	23	29	3.80	+ 1.44	Austin	9.65	Enterprise	1.77
Missouri	59.4	+ 2.3	5 stations	94	1†	Sublett	15	29	2.71	+ 0.32	New Madrid	14.03	Sublett	T.
Montana	48.5	+ 3.0	Springbrook	99	9	Red Lodge	− 1	27	1.41	+ 0.31	Snowshoe	9.55	2 stations	0.00
Nebraska	55.7	+ 4.2	2 stations	97	10	Gordon	4	26	0.63	− 0.94	Cairo	2.09	9 stations	0.00
Nevada	51.0	+ 1.7	Logan	101	8	Cobre	7	28	0.42	− 0.13	Palmetto	1.19	2 stations	0.00
New England	50.9	+ 2.1	Norfolk, Mass	89	5	Jacksonville, Vt	10	31	1.65	− 2.14	Nantucket, Mass	4.72	Southington, Conn	0.55
New Jersey	57.2	+ 3.0	Clayton	90	6	2 stations	18	30†	3.15	− 0.38	Cape May	5.55	Sussex	1.55
New Mexico	53.9	+ 0.4	Alma	98	1	Tres Piedras	− 1	21	0.72	− 0.33	Swastika Ranch	2.76	7 stations	0.00
New York	51.1	+ 2.1	2 stations	88	5†	Franklinville	13	29	2.39	− 1.10	Adams Center	5.77	Sherburne	0.84
North Carolina	62.8	+ 3.4	Lumberton	96	2	Banners Elk	11	30	3.44	+ 0.04	Durham	7.09	Bryson City	0.93
North Dakota	48.2	+ 4.8	Napoleon	90	10	2 stations	0	20	0.54	− 0.50	New Salem	1.55	Dunseith	T.
Ohio	56.7	+ 3.7	Amesville	94	3	Amesville	18	30	4.19	+ 2.04	Waynesville	8.03	Summerfield	1.27
Oklahoma	62.9	+ 1.3	2 stations	100	1	Hooker	11	28	1.33	− 1.24	Webbers Falls	6.50	3 stations	0.02
Oregon	52.9	+ 1.5	Ashland	89	9	Range	14	1	2.63	+ 0.35	Glenora	15.78	Mikkalo	T.
Pennsylvania	55.6	+ 3.8	Claysville	91	3	Saegerstown	14	29	1.91	− 1.15	Saegerstown	5.23	Towanda	0.62
Porto Rico (September)	77.9	− 1.2	Humacao	96	26	Las Marias	54	6	11.12	+ 3.31	Nagnabo	20.24	Isabela	2.90
Porto Rico	77.5	− 0.4	Arecibo	98	16	Las Marias	54	8†	5.74	− 2.72	La Carmelita (B)	14.33	Rio Piedras	0.87
South Carolina	66.5	+ 3.5	Santue	100	2	2 stations	22	30	4.39	+ 1.22	Yemassee	9.32	Clemson College	1.40
South Dakota	54.0	+ 6.2	Forestburg	100	11	Kennebec	4	27	0.85	− 0.68	Cascade Springs	2.66	Tama	0.11
Tennessee	61.7	+ 2.3	2 stations	96	1†	Mountain City	14	30	3.77	+ 1.37	Covington	10.47	Clinton	1.05
Texas	67.8	+ 0.4	2 stations	101	13†	Plemons	16	28	1.73	− 0.89	Galveston	9.36	3 stations	0.00
Utah	49.7	+ 1.4	St. George	96	9†	Woodruff	8	28†	1.51	+ 0.46	Park City	4.17	Kelton	0.05
Virginia	50.5	+ 3.2	2 stations	93	1	Marion	12	30	3.82	+ 0.71	Warsaw	7.39	Big Stone Gap	1.30
Washington	51.4	+ 1.2	Ephrata	89	15	Colville	11	28	3.72	+ 0.94	Goat Lake	20.10	2 stations	T.
West Virginia	58.1	+ 3.5	Spencer	95	3	Pickens	15	29	1.85	− 0.57	Bens Run	3.05	Burlington	0.80
Wisconsin	51.4	+ 3.5	3 stations	87	16	Prentice	5	29	1.33	− 1.23	Plum Island	3.55	Downing	0.22
Wyoming	45.1	+ 2.8	Hyattville	94	9	Fox Park	−12	20	1.29	+ 0.41	Bennett	3.72	Pinedale	0.03

*Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, and Connecticut. †Other dates also.

TABLE 1.—*Climatological data for U. S. Weather Bureau stations, October, 1910.*

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.									Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.					Clear days.	Partly cloudy days	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.				Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.					
New England.							**52.5**	**+ 3.0**										**75**	**1.90**	**− 1.7**									**5.3**	
Eastport	76	67	85	29.83	29.91	− .09	47.8	+ 1.2	68	5	54	31	31	42	22	44	42	42	1.85	− 2.0	15	9,325	w.	39	w.	11	6	6	19	7.3	
Greenville	1,070	6	....	28.76	29.94	....	43.6	....	80	6	51	17	31	36	40	....	....	....	2.13	....	13	....	....	....	....	....	....	....	....	3.3	
Portland, Me.	103	81	117	29.84	29.96	− .08	50.0	+ 0.9	77	5	58	29	31	42	29	44	39	70	1.27	− 2.4	9	7,305	nw.	48	nw.	2	11	8	12	5.4	
Concord	288	70	79	29.66	29.98	− .07	49.7	+ 1.0	85	5	61	19	31	39	45	....	....	....	1.03	− 2.2	9	4,588	nw.	29	w.	1	15	6	10	4.9	T.
Burlington	404	11	48	29.53	29.97	− .07	47.8	+ 0.9	81	6	56	30	40	40	31	....	....	....	3.34	+ 0.2	13	9,611	s.	46	s.	4	4	11	16	6.7	2.9
Northfield	876	16	60	29.03	29.99	− .05	45.7	+ 2.1	82	6	56	19	31	35	38	42	39	81	1.68	− 0.8	15	6,396	s.	33	sw.	1	4	11	16	6.8	0.5
Boston	125	115	188	29.84	29.98	− .07	56.0	+ 3.7	85	5	65	33	30	47	32	49	44	70	1.14	− 2.7	10	8,540	sw.	42	nw.	26	14	5	12	4.9	
Nantucket	12	14	90	29.97	29.98	− .07	55.8	+ 1.3	73	6	61	36	31	50	21	52	49	82	4.72	+ 1.3	10	13,274	sw.	54	sw.	27	11	11	9	5.2	
Block Island	26	11	46	29.96	29.99	− .06	56.3	+ 1.0	72	6	62	38	30	51	18	52	48	77	2.37	− 1.7	7	15,025	sw.	54	nw.	23	19	3	9	4.2	
Narragansett	....	9	....	....	....	....	55.7	+ 3.6	78	6	66	24	31	45	35	....	....	....	2.08	....	12	....	w.	....	....	....	....	22	5	4	....	
Providence	160	141	165	29.82	30.00	− .05	54.3	+ 2.1	81	5	63	27	31	45	30	49	45	75	1.60	− 2.2	9	8,474	nw.	48	nw.	2	14	10	7	4.4	
Hartford	159	122	140	29.83	30.00	− .06	54.8	+ 3.6	80	6	64	26	31	46	32	48	42	69	0.77	− 3.1	7	5,849	nw.	36	sw.	27	8	10	13	5.9	
New Haven	106	116	155	29.89	30.00	− .06	55.8	+ 3.0	80	5	65	28	31	47	30	49	43	68	1.15	− 2.8	7	7,282	nw.	37	nw.	26	14	12	5	4.1	
Mid. Atlantic States.							**53.1**	**+ 2.7**										**75**	**3.20**	**0.0**									**4.1**	
Albany	97	102	115	29.89	30.00	− .06	53.2	+ 2.8	83	6	63	30	31	44	34	47	42	72	0.87	− 2.1	6	6,549	s.	31	s.	4	11	14	6	4.7	T.
Binghamton	871	78	88	29.07	30.01	− .05	50.3	+ 1.1	82	6	59	23	30	41	38	....	....	....	1.46	− 1.7	7	4,600	nw.	31	w.	1	13	5	13	5.6	T.
New York	314	108	350	29.68	30.01	− .05	58.2	+ 2.6	83	6	66	32	30	51	26	51	45	67	3.79	+ 0.1	5	9,421	nw.	50	nw.	23	14	9	8	4.3	
Harrisburg	374	94	104	29.66	30.06	− .02	57.9	+ 3.9	85	6	67	31	30	48	31	50	44	69	1.30	− 1.6	7	5,098	nw.	30	sw.	27	14	12	5	3.9	T.
Philadelphia	117	116	184	29.92	30.05	− .02	60.1	+ 3.8	84	6	68	35	30	52	26	53	49	73	2.90	− 0.2	11	7,796	nw.	33	sw.	27	15	6	10	4.8	
Scranton	805	111	119	29.17	30.04	− .03	54.4	+ 3.0	84	6	65	26	30	44	37	49	46	81	0.85	− 2.1	6	5,388	sw.	30	sw.	1	11	15	5	4.0	T.
Atlantic City	52	37	48	29.98	30.04	− .03	59.0	+ 1.6	83	16	66	30	30	51	29	54	49	74	2.73	− 0.6	8	6,458	nw.	21	s.	5	17	6	8	4.0	
Cape May	17	9	56	30.04	30.06	− .01	60.4	+ 0.8	82	16	67	36	30	54	27	55	51	77	5.55	+ 2.2	9	7,308	sw.	28	nw.	25	18	8	5	3.4	
Baltimore	123	100	113	29.92	30.05	− .03	60.8	+ 3.3	90	1	70	32	30	52	30	53	48	69	2.71	− 0.3	10	5,456	sw.	25	sw.	25	19	7	5	3.4	
Washington	112	62	85	29.92	30.04	− .04	60.2	+ 3.6	90	1	71	31	30	50	34	52	48	73	5.74	+ 2.6	9	3,691	nw.	29	sw.	27	20	3	8	3.8	
Cape Henry	18	9	58	....	....	....	**60.6**	**+ 3.2**										**80**	**3.96**	**0.0**									**3.4**	
Lynchburg	681	83	88	29.34	30.08	− .01	60.4	+ 3.5	86	1	71	27	30	50	37	53	50	78	5.09	+ 1.7	7	3,030	nw.	21	nw.	25	17	9	5	4.3	
Mount Weather	1,725	10	54	28.22	30.03	− .06	55.8	+ 4.3	83	1	64	25	30	48	29	49	45	74	3.73	+ 1.3	8	13,125	w.	52	w.	25	16	8	7	3.7	T.
Norfolk	91	102	111	29.96	30.06	− .01	63.8	+ 2.5	86	6	72	36	30	56	27	59	56	80	3.33	− 0.6	7	6,772	s.	30	nw.	29	17	7	7	3.6	T.
Richmond	144	189	197	29.91	30.06	− .02	61.0	+ 1.2	87	6	72	31	31	50	33	....	....	....	5.03	+ 1.7	10	5,563	s.	36	sw.	27	13	12	6	4.2	
Wytheville	2,293	40	47	27.70	30.07	− .02	56.7	+ 3.1	80	2	67	23	30	47	34	50	47	82	2.94	− 0.2	11	3,701	w.	23	w.	25	17	7	7	3.9	0.1
S. Atlantic States.							**66.6**	**+ 2.9**										**80**	**3.96**	**0.0**									**3.4**	
Asheville	2,255	53	75	27.75	30.09	.00	57.8	+ 2.5	84	2	68	20	30	48	34	52	50	84	2.64	− 0.3	7	5,871	nw.	30	nw.	28	19	7	5	3.5	T.
Charlotte	773	68	76	29.24	30.07	− .01	63.6	+ 2.5	91	2	74	28	30	54	31	56	52	75	4.01	+ 0.9	8	4,725	ne.	22	sw.	27	18	5	8	3.5	
Hatteras	11	12	47	30.03	30.04	− .02	69.0	+ 3.0	84	20	75	41	30	63	22	64	62	82	1.45	− 4.6	8	10,974	nw.	48	n.	20	20	8	3	3.4	
Manteo	12	12	46	....	....	....	66.2	....	86	1	74	30	31	59	30	....	....	....	4.05	− 2.0	8	....	ne.	....	....	....	18	7	6	....	
Raleigh	376	103	110	29.66	30.06	− .01	63.8	+ 3.3	86	6	74	30	30	54	30	56	52	73	3.54	0.0	6	5,742	ne.	30	sw.	6	15	12	4	3.5	T.
Wilmington	78	81	91	29.97	30.05	− .01	66.8	+ 3.5	88	2	76	31	30	58	30	61	58	80	1.72	− 2.0	7	5,526	ne.	28	ne.	18	17	12	2	3.3	
Charleston	48	11	92	29.98	30.03	− .03	70.0	+ 2.9	86	2	77	37	30	63	28	64	62	79	6.18	+ 2.2	7	8,261	n.	58	e.	19	18	8	5	3.2	
Columbia, S. C.	351	41	57	29.67	30.05	− .02	66.2	+ 2.2	91	2	77	29	30	56	34	58	54	75	3.01	+ 0.2	5	4,772	ne.	25	s.	6	20	8	3	3.0	
Augusta	180	89	97	29.85	30.04	− .03	67.0	+ 3.4	89	2	78	29	30	56	34	60	57	81	4.25	+ 1.9	5	4,638	nw.	31	ne.	18	22	6	3	2.8	
Savannah	65	150	194	29.96	30.03	− .02	69.4	+ 3.1	89	21	78	34	30	61	25	64	62	84	4.65	+ 1.1	8	8,997	se.	70	ne.	19	18	7	6	3.3	
Jacksonville	43	96	129	29.95	30.00	− .02	72.0	+ 2.4	87	21	79	37	30	65	25	67	65	84	8.02	+ 3.0	13	7,802	ne.	56	ne.	18	16	8	7	4.3	
Florida Peninsula.							**76.4**	**− 0.6**										**82**	**12.33**	**+ 6.4**									**5.4**	
Jupiter	28	10	46	29.91	29.94	− .02	75.4	− 1.4	86	2	82	50	29	69	26	71	69	84	20.88	+11.4	19	9,418	se.	70	s.	18	8	15	8	5.3	
Key West	22	10	53	29.88	29.90	− .04	77.3	− 1.4	87	4	82	59	30	72	14	73	70	79	10.95	+ 5.6	14	10,476	e.	100	s.	17	11	11	9	5.2	
Tampa	35	79	96	29.92	29.96	− .02	73.6	+ 1.0	89	2	81	43	30	66	24	67	65	83	5.17	+ 2.2	12	5,819	ne.	48	n.	18	10	9	12	5.6	
East Gulf States.							**67.8**	**+ 2.1**										**74**	**3.46**	**+ 0.7**									**3.7**	
Atlanta	1,174	190	216	28.83	30.07	.00	64.4	+ 2.0	89	2	74	30	29	55	26	57	52	70	2.90	+ 0.6	5	8,627	ne.	44	w.	25	19	4	8	3.5	T.
Macon	370	78	87	29.65	30.04	− .02	66.5	+ 2.8	90	2	77	28	30	56	35	....	....	....	3.25	+ 1.1	5	4,838	n.	31	ne.	18	19	8	4	3.0	
Thomasville	273	8	57	29.72	30.02	− .02	70.0	+ 1.8	90	20	81	30	31	59	36	62	59	80	5.09	+ 1.6	8	4,190	ne.	26	ne.	18	17	8	6	3.6	
Pensacola	56	140	183	29.96	30.02	− .01	71.0	+ 1.6	86	19	78	35	29	64	23	....	....	....	3.94	− 0.1	6	9,993	ne.	39	se.	3	15	8	8	4.1	
Anniston	741	9	57	29.30	30.09	+ .02	64.3	+ 1.9	90	2	76	25	30	52	38	....	....	....	3.76	+ 1.4	6	3,841	n.	24	e.	18	20	5	6	3.6	
Birmingham	700	11	48	29.31	30.08	+ .01	66.0	+ 1.6	91	2	77	27	29	56	33	57	53	72	2.42	+ 0.1	5	4,834	n.	26	se.	3	14	9	8	4.6	
Mobile	57	98	106	29.96	30.02	− .02	70.5	+ 3.4	89	1	80	36	29	62	29	63	60	76	7.45	+ 4.3	8	5,836	n.	29	nw.	27	18	10	3	3.1	
Montgomery	223	100	112	29.80	30.05	− .01	68.4	+ 1.7	92	2	79	31	30	58	33	60	55	71	1.41	− 1.0	7	4,724	ne.	29	n.	27	20	4	7	3.2	
Meridian	375	84	93	29.65	30.05	− .01	65.6	+ 2.6	88	2	77	28	30	54	35	58	55	79	2.80	+ 0.1	9	3,407	ne.	25	s.	3	15	7	9	4.2	
Vicksburg	247	62	74	29.78	30.06	.00	67.3	+ 2.0	90	17	77	34	29	57	30	59	55	73	2.95	+ 0.2	8	4,323	n.	25	nw.	28	17	5	9	3.8	
New Orleans	51	90	121	29.96	30.02	− .01	71.5	+ 2.0	88	3	78	40	29	65	20	64	60	75	2.09	− 0.8	9	6,188	n.	30	n.	27	14	9	8	4.2	
West Gulf States.							**67.1**	**+ 0.8**										**68**	**3.31**	**+ 0.6**									**3.1**	
Shreveport	249	77	84	29.78	30.05	.00	67.4	+ 1.8	91	1	78	32	29	56	33	58	54	71	2.40	− 0.8	7	4,185	se.	24	n.	27	19	8	4	2.9	
Bentonville	1,303	11	44	28.69	30.06	+ .01	59.4	+ 1.4	89	1	72	23	29	47	36	....	....	....	2.42	− 0.4	7	5,925	s.	21	s.	30	23	4	4	2.6	
Fort Smith	457	79	94	29.57	30.05	.00	63.2	+ 1.5	92	1	75	28	29	52	35	54	48	69	2.69	− 0.1	7	5,571	e.	36	nw.	5	20	6	5	2.8	
Little Rock	357	139	147	29.69	30.07	+ .01	64.0	+ 1.1	90	1	74	31	29	54	32	56	52	74	6.44	+ 3.9	10	6,083	ne.	37	n.	27	21	4	6	3.3	
Brownsville	57	4	....	....	....	....	73.4	....	93	4	83	44	29	64	30	....	....	....	3.31	....	5	....	n.	....	....	....	....	....	....	....	....	
Corpus Christi	20	69	77	30.00	30.02	+ .02	72.0	− 0.6	91	5	80	48	29	64	26	64	60	75	0.17	− 1.9	4	7,883	n.	33	ne.	28	17	8	6	3.9	
Fort Worth	670	106	114	29.32	30.04	+ .01	67.4	+ 1.1	99	14	80	31	29	55	36	55	47	56	0.68	− 1.8	4	7,604	s.	37	n.	27	17	11	3	3.2	
Galveston	54	106	112	29.98	30.04	+ .01	72.1	− 0.3	87	15	77	47	29	67	20	65	61	72	9.36	+ 5.2	9	8,506	se.	42	n.	28	21	8	2	2.9	
Houston	....	....	....	29.88	30.03	....	70.5	....	91	15	80	39	29	61	28	....	....	....	1.98	....	8	5,595	se.	26	nw.	27	16	9	6	3.7	
Palestine	510	73	79	29.51	30.04	+ .01	68.6	+ 2.4	92	14	80	31	29	58	31	58	51	62	1.06	− 2.5	4	5,584	s.	28	n.	27	21	5	5	2.8	
San Antonio	701	80	91	29.31	30.04	+ .03	69.0	− 0.2	94	15	80	36	29	58	32	60	54	68	3.35	+ 1.9	8	3,931	n.	33	n.	27	18	8	5	3.6	
Taylor	583	55	63	29.44	30.05	+ .03	68.0	− 0.3	93	15	79	35	29	57	33	....	....	....	4.56	+ 2.0	7	5,513	n.	35	n.	27	22	5	4	2.6	
Ohio Val. and Tenn.							**60.4**	**+ 3.3**										**73**	**4.23**	**+ 1.6**									**3.7**	
Chattanooga	762	189	213	29.28	30.09	.00	63.8	+ 3.0	89	2	74	28	30	53	35	55	51	72	2.29	− 0.6	7	5,481	nw.	33	nw.	6	20	5	6	3.5	T.
Knoxville	996	93	100	29.02	30.08	− .01	62.0	+ 3.9	87	2	73	24	30	51	34	55	51	76	1.68	− 0.9	5	3,347	ne.	28	se.	6	17	11	3	3.8	T.
Memphis	399	76	97	29.66	30.09	+ .02	64.1	+ 1.6	90	2	74	28	29	55	26	56	52	71	6.85	+ 4.1	8	5,703	s.	72	sw.	13	18	7	6	3.3	T.
Nashville	546	168	191	29.50	30.08	.00	63.0	+ 2.7	91	2	74	27	30	52	38	55	50	72	3.20	+ 0.7	5	6,412	nw.	35	nw.	27	19	6	6	3.4	T.
Lexington	989	75	102	29.00	30.06	− .02	59.6	+ 3.1	84	3	70	25	29	50	31	....	....	....	1.67	− 0.6	6	6,933	s.	30	s.	4	15	12	4	3.9	0.5
Louisville	525	111	132	29.49	30.08	.00	61.6	+ 3.2	89	1	72	30	29	51	30	53	49	71	6.70	+ 4.1	6	5,279	sw.	28	w.	27	21	5	5	3.0	T.
Evansville	431	72	82	29.59	30.06	− .02	61.4	+ 3.4	90	1	71	29	29	51	30	54	50	77	11.19	+ 8.1	6	4,868	s.	32	sw.	26	19	8	4	3.0	T.
Indianapolis	822	154	164	29.17	30.06	− .01	58.6	+ 3.6	84	3	69	26	29	48	32	51	46	71	5.32	+ 2.5	8	6,707	s.	36	sw.	30	22	3	6	3.0	T.
Cincinnati	628	152	160	29.39	30.07	− .01	60.0	+ 3.0	89	3	71	29	29	50	31	52	48	71	5.78	+ 3.5	6	4,300	sw.	26	sw.	27	18	6	7	3.7	T.
Columbus	824	173	222	29.18	30.03	− .05	57.8	+ 2.7	88	3	68	27	30	48	35	50	46	72	5.22	+ 2.9	6	8,009	w.	43	w.	27	19	4	8	3.5	0.5
Pittsburg	842	353	410	29.14	30.05	− .03	57.6	+ 2.7	84	3	67	28	30	48	36	50	45	68	1.69	− 0.7	9	8,136	nw.	45	nw.	35	19	4	8	3.5	T.
Parkersburg	638	77	84	29.41	30.07	− .01	59.6	+ 5.0	89	3	71	26	30	48	42	52	48	75	1.15	− 1.3	7	4,219	s.	31	nw.	27	14	7	10	5.5	T.
Elkins	1,940	41	50	28.03	30.09	− .01	55.8	+ 4.4	85	3	68	22	30	44	45	48	45	82	2.21	− 0.2	9	2,972	w.	22	w.	25	11	13	7	4.8	1.4
Lower Lake Region.							**53.5**	**+ 1.9**										**75**	**3.46**	**+ 0.5**									**5.1**	
Buffalo	767	178	206	29.17	30.00	− .05	53.4	+ 1.9	78	3	61	28	29	45	32	50	47	82	5.26	+ 1.7	12	11,261	sw.	60	w.	27	9	12	10	5.6	0.2
Canton	448	10	71	29.49	29.97	....	47.6	+ 0.4	78	4	57	21	13	38	34	....	....	....	4.41	+ 1.1	13	8,192	sw.	60	sw.	27	9	8	14	6.2	0.6
Oswego	335	76	91	29.61	29.98	− .07	51.8	+ 0.6	80	6	59	28	30	44	33	47	43	76	3.34	0.0	11	8,671	s.	39	w.	27	8	8	15	6.1	1.1
Rochester	523	86	102	29.44	30.01	− .04	52.8	+ 2.0	81	18	61	30	30	44	33	47	43	75	2.95	+ 0.1	10	6,462	sw.	40	sw.	27	9	11	11	5.4	2.2
Syracuse	597	97	113	29.34	29.98	− .08	51.8	+ 0.8	83	6	60	29	30	44	36	....	....	....	1.53	− 1.7	10	9,408	s.	47	w.	1	10	7	14	5.6	0.4
Erie	714	92	102	29.23	30.01	− .04	54.8	+ 1.7	80	3	62	32	30	48	30	49	44	71	5.00	+ 1.2	9	9,165	s.	35	w.	27	9	13	9	5.4	4.3
Cleveland	762	190	201	29.20	30.02	− .04	56.0	+ 2.9	84	3	64	33	30	49	32	51	47	75	3.79	+ 1.1	6	11,561	se.	54	w.	27	15	7	9	4.8	T.
Sandusky	629	62	70	29.33	30.02	− .04	56.2	+ 2.3	85	3	64	28	29	48	33	....	....	....	4.91	+ 2.5	8	6,240	sw.	32	w.	27	15	9	7	3.8	T.
Toledo	628	207	246	29.34	30.03	− .02	56.2	+ 3.6	85	3	66	27	29	47	33	49	46	75	2.34	+ 0.1	8	10,572	sw.	47	s.	30	18	7	6	3.8	0.1
Detroit	730	218	258	29.23	30.02	− .03	54.6	+ 2.9	82	3	63	26	29	46	29	47	43	72	1.07	− 1.3	7	10,686	w.	45	sw.	30	14	9	8	4.4	T.

TABLE 1.—*Climatological data for U. S. Weather Bureau stations, October, 1910*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches			Temperature of the air, in degrees Fahrenheit.								Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.			Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.				
Upper Lake Region.							**51.2**	**+ 3.6**									**73**	**2.26**	**− 0.6**									**5.4**	
Alpena	609	13	92	29.31	29.98	− .05	49.3	+ 3.4	83	18	58	26	29	40	36	44	41	81	3.47	0.0	13	8,508	nw.	47	sw.	3	10	10	11	5.6	2.1
Escanaba	612	40	82	29.31	29.98	− .03	48.6	+ 3.5	71	8	56	21	29	41	23	44	41	81	3.04	0.0	8	7,661	s.	38	ne.	20	8	7	16	6.1	1.1
Grand Haven	632	54	92	29.30	29.98	− .05	53.0	+ 2.8	80	17	61	27	29	45	30	49	46	81	2.48	0.0	7	9,001	s	44	w.	27	14	10	7	4.3	8.0
Grand Rapids	707	127	162	29.23	30.01	− .03	54.0	+ 3.9	82	18	63	26	29	45	29	48	45	79	3.17	+ 0.6	10	7,595	sw.	37	sw.	30	12	12	7	4.9	0.1
Lansing	.....	.....	.....	29.06	30.02	.....	51.8	.....	82	18	63	23	29	41	32	46	44	87	2.27	.....	8	4,401	sw.	24	sw.	3	16	5	10	4.2	0.6
Houghton	668	66	74	29.21	29.94	− .06	48.2	+ 3.1	86	17	57	26	27	40	42	.....	.....	.....	2.34	− 0.8	9	5,270	w.	36	n.	19	10	7	14	5.8	4.0
Marquette	734	77	116	29.18	29.97	− .04	49.4	+ 3.7	83	18	58	24	29	41	32	43	39	73	3.53	+ 0.3	10	8,859	nw.	44	s.	8	8	10	13	6.4	11.5
Port Huron	638	70	120	29.30	30.00	− .04	52.1	+ 2.6	80	18	61	26	29	43	30	47	43	78	1.22	− 1.5	6	8,662	sw.	38	nw.	27	12	6	13	5.5	T.
Sault Sainte Marie	614	11	61	29.28	29.98	− .03	46.0	+ 2.6	78	19	54	25	29	38	37	42	40	83	2.83	− 0.4	11	6,901	nw.	48	nw.	1	5	9	17	7.4	T.
Chicago	823	140	310	29.13	30.02	− .02	58.6	+ 5.4	84	17	66	27	29	51	25	52	48	75	1.79	− 0.8	7	8,342	sw.	46	s.	3	14	12	5	3.9	T.
Milwaukee	681	122	139	29.27	30.01	− .02	54.8	+ 4.6	82	3	63	26	29	47	30	48	44	72	1.24	− 1.2	7	8,180	w.	35	sw.	3	16	8	7	4.0	T.
Green Bay	617	49	86	29.29	29.96	− .06	52.0	+ 4.9	80	18	61	24	29	43	34	46	43	78	1.41	− 1.0	5	7,707	sw.	40	sw.	3	8	10	13	6.4	T.
Duluth	1,133	11	47	28.73	29.96	− .04	47.6	+ 2.4	79	15	56	23	29	39	30	41	36	73	0.81	− 1.9	6	10,438	w.	48	nw.	19	11	10	10	5.1	0.1
North Dakota.							**42.6**	**+ 6.3**									**69**	**0.56**	**− 0.7**									**4.6**	
Moorhead	940	8	57	28.93	29.95	− .05	50.4	+ 7.6	90	17	64	21	28	37	44	42	37	74	0.55	− 1.5	6	7,365	nw.	36	n.	19	13	11	7	3.9	T.
Bismarck	1,674	8	57	28.19	29.98	− .01	50.0	+ 5.9	91	10	64	17	28	35	50	40	34	67	0.75	− 0.3	3	7,742	nw.	42	nw.	18	13	8	10	4.9	T.
Devils Lake	1,482	11	44	28.35	29.94	− .05	47.6	+ 7.1	82	10	60	17	28	36	39	39	32	66	0.91	− 0.3	8	9,062	nw.	40	n.	19	14	7	10	5.0	T.
Williston	1,872	14	56	.....	.....	.....	47.4	+ 4.5	90	10	62	13	28	32	56	.....	.....	.....	0.04	− 0.7	2	7,472	s.	54	w.	4	6	14	11	.....	T.
Upper Miss. Valley.							**56.6**	**+ 3.7**									**72**	**1.82**	**− 0.6**									**3.5**	
Minneapolis	918	102	208	.....	.....	.....	54.0	.....	84	17	64	23	29	44	33	.....	.....	.....	0.86	− 1.7	7	9,567	s.	44	se.	2	16	7	8	4.4	0.1
St. Paul	837	171	179	29.04	29.95	− .06	53.6	+ 5.5	83	17	65	23	29	43	34	45	39	66	0.75	− 1.6	6	8,299	s.	50	sw.	18	14	10	7	4.2	0.5
La Crosse	714	11	48	29.20	29.98	− .04	53.4	+ 3.5	85	16	64	24	29	42	38	.....	.....	.....	0.57	− 1.9	6	4,062	s.	22	nw.	27	15	8	8	4.3	T.
Madison	974	70	78	28.93	29.98	− .05	53.6	+ 4.8	81	18	63	26	29	45	29	46	42	72	0.63	− 1.8	7	7,703	sw.	40	n.	26	14	7	10	4.8	0.2
Charles City	1,015	10	49	28.92	30.01	− .01	52.4	+ 4.2	85	11	65	16	29	40	41	44	41	77	0.36	− 1.7	4	5,104	nw.	26	n.	27	14	10	7	4.2	T.
Davenport	606	71	79	29.35	30.01	− .03	57.1	+ 4.5	88	16	68	24	29	46	33	49	43	69	0.61	− 1.8	7	4,841	w.	28	w.	27	20	6	5	2.9	T.
Des Moines	861	84	101	29.09	30.00	− .03	56.4	+ 3.9	86	2	68	20	29	45	39	47	42	66	0.68	− 2.0	4	5,467	nw.	28	sw.	23	18	4	9	3.6	T.
Dubuque	698	100	115	29.28	30.03	− .01	55.0	+ 3.0	82	16	65	24	29	45	32	48	43	72	0.89	− 1.8	5	4,372	nw.	30	nw.	26	19	4	8	3.7	0.1
Keokuk	614	64	78	29.36	30.04	− .01	59.2	+ 4.7	86	2	71	22	29	48	38	50	45	70	0.81	− 1.7	5	5,056	s.	30	w.	27	22	2	7	3.0	T.
Cairo	356	87	93	29.69	30.07	.00	61.4	+ 2.3	91	1	71	28	29	52	31	54	50	74	11.57	+ 8.9	8	5,612	ne.	33	sw.	26	20	4	7	3.2	....
La Salle	536	56	64	29.46	30.04	.00	56.8	+ 4.9	86	16	68	22	29	46	34	.....	.....	.....	1.03	− 1.6	7	5,164	w.	30	sw.	3	20	4	7	3.4	0.2
Peoria	609	11	45	29.37	30.04	− .01	56.6	+ 4.6	85	16	69	21	29	44	38	49	46	79	1.69	− 0.9	6	4,967	s.	34	w.	3	21	7	3	2.8	T.
Springfield, Ill.	644	10	91	29.34	30.03	− .02	58.2	+ 3.6	82	16	69	29	29	48	38	50	46	73	1.74	− 0.9	7	5,866	s.	28	nw.	27	21	4	6	2.7	T.
Hannibal	534	75	109	29.46	30.04	− .01	58.2	+ 2.3	86	2	70	22	29	46	40	.....	.....	.....	1.14	− 0.5	5	6,036	sw.	40	sw.	26	22	3	6	2.8	T.
St. Louis	567	208	317	29.44	30.04	− .02	60.8	+ 2.4	86	2	70	28	29	52	30	53	48	70	3.98	+ 1.6	8	7,297	s.	37	nw.	27	22	5	4	3.0	T.
Missouri Valley.							**57.8**	**+ 4.7**									**63**	**1.03**	**− 0.9**									**3.0**	
Columbia, Mo.	784	11	84	29.21	30.04	− .01	58.5	+ 3.7	87	2	70	20	29	46	37	.....	.....	.....	0.67	− 1.8	5	5,111	s.	30	nw.	27	24	1	6	2.3	T.
Kansas City	963	161	181	28.99	30.03	− .01	61.2	+ 5.4	85	2	72	29	28	51	37	51	44	62	0.33	− 1.9	2	8,637	s.	34	nw.	27	22	5	4	2.5	T.
St. Joseph	.....	.....	.....	28.99	30.03	.....	59.9	.....	87	2	72	28	29	48	34	50	43	64	0.42	.....	3	5,523	s.	34	nw.	27	18	8	5	3.0	T.
Springfield, Mo.	1,324	98	104	28.66	30.06	+ .01	59.4	+ 2.1	87	1	69	25	29	49	29	51	45	68	3.08	+ 0.3	8	6,944	s.	32	nw.	26	18	8	5	2.9	....
Iola	984	11	50	29.00	30.05	+ .01	59.6	+ 2.7	90	1	73	23	29	46	41	.....	.....	.....	1.14	− 1.1	3	4,729	s.	24	s.	18	20	7	4	2.8	....
Topeka	983	85	101	.....	.....	.....	60.0	+ 3.7	87	2	72	26	28	48	36	.....	.....	.....	1.57	− 0.3	2	6,820	s.	31	n.	26	20	7	4	2.8	T.
Lincoln	1,189	11	84	28.74	30.01	− .02	58.2	+ 4.9	88	2	70	26	28	46	35	48	43	66	1.21	− 0.6	4	8,223	s.	40	nw.	27	22	5	4	3.0	T.
Omaha	1,105	115	121	28.83	30.01	− .02	58.9	+ 3.7	88	2	69	27	28	48	32	49	42	62	0.72	− 1.6	4	6,131	s.	38	n.	26	18	8	5	3.0	0.1
Valentine	2,598	47	54	27.29	30.01	.00	53.9	+ 5.4	95	10	70	10	28	37	52	42	32	54	0.20	− 1.1	4	7,691	nw.	44	s.	17	22	7	2	2.6	0.2
Sioux City	1,135	94	164	28.78	30.00	− .02	56.0	+ 4.9	88	16	68	25	28	44	38	47	41	65	0.84	− 1.0	4	9,586	s.	46	n.	27	21	7	3	2.7	T.
Pierre	1,572	70	75	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Huron	1,306	56	67	28.59	29.99	− .02	54.0	+ 9.3	94	2	69	21	28	39	46	42	34	60	0.52	− 0.8	4	8,150	s.	41	nw.	27	14	10	7	4.4	T.
Yankton	1,233	49	57	28.66	29.98	− .03	56.5	+ 6.0	91	11	70	24	28	44	39	.....	.....	.....	1.64	+ 0.1	3	6,219	w.	36	nw.	27	14	14	3	3.9	T.
Northern Slope.							**49.8**	**+ 5.1**									**61**	**0.67**	**− 0.3**									**4.2**	
Havre	2,505	11	44	27.33	29.97	− .01	49.2	+ 5.6	88	9	62	14	28	36	49	42	37	68	0.08	− 0.4	2	7,359	sw.	42	sw.	6	11	12	8	5.8	....
Miles City	2,371	26	48	27.47	30.06	+ .05	53.2	+ 6.7	88	9	67	22	28	40	41	44	39	71	0.48	− 0.3	5	4,087	s.	32	sw.	4	16	13	2	3.7	T.
Helena	4,110	8	56	25.84	30.05	+ .02	48.4	+ 4.4	84	9	60	17	27	37	41	40	32	60	0.84	0.0	8	5,157	w.	36	w.	25	11	12	8	4.4	0.5
Kalispell	2,962	11	34	26.97	30.04	+ .03	47.0	+ 4.5	73	9	57	19	27	37	40	41	37	75	1.29	+ 0.1	6	3,040	w.	23	sw.	3	13	7	11	5.2	....
Rapid City	3,234	46	50	26.61	30.03	+ .02	54.0	+ 7.4	88	11	67	21	28	41	46	41	31	48	0.41	− 0.7	6	6,051	w.	33	w.	16	16	7	8	4.1	1.0
Cheyenne	6,088	56	64	24.07	30.04	+ .03	49.6	+ 4.3	85	9	63	16	28	36	46	37	26	49	1.04	+ 0.3	5	8,149	nw.	40	nw.	4	14	14	3	3.8	0.4
Lander	5,372	26	36	24.72	30.10	+ .06	47.4	+ 5.3	80	10	64	16	28	31	46	36	27	56	0.37	− 0.7	3	2,455	ne.	23	n.	2	13	14	4	4.1	2.0
Sheridan	3,790	9	47	26.14	30.07	.....	48.3	.....	87	10	65	16	28	32	51	39	33	67	1.64	.....	7	4,566	nw.	39	nw.	4	13	2	16	5.3	0.7
Yellowstone Park	6,200	11	48	23.96	30.12	+ .10	43.6	+ 2.1	75	10	56	12	27	32	35	34	26	57	1.49	+ 0.4	11	6,326	sw.	36	sw.	3	13	11	7	3.9	1.0
North Platte	2,821	11	51	27.11	30.04	+ .02	55.4	+ 5.4	93	10	74	12	28	37	56	41	33	56	0.01	− 1.1	1	6,431	w.	38	nw.	27	25	4	2	1.9	....
Middle Slope.							**53.8**	**+ 3.2**									**54**	**0.47**	**− 1.1**									**3.0**	
Denver	5,291	129	136	24.78	30.03	+ .02	55.4	+ 4.4	89	10	70	19	28	41	40	40	25	40	0.21	− 0.8	5	6,456	s.	43	ne.	2	15	15	1	3.4	0.4
Pueblo	4,685	80	86	25.34	30.03	+ .04	54.6	+ 2.3	88	7	73	18	28	36	56	40	26	42	0.06	− 0.6	2	4,545	nw.	32	w.	26	21	8	2	2.5	0.9
Concordia	1,398	42	50	28.56	30.04	+ .01	59.4	+ 4.0	88	2	73	24	28	46	40	49	42	65	0.37	− 1.6	2	5,430	s.	26	nw.	27	16	12	3	3.5	T.
Dodge City	2,509	11	51	27.44	30.04	+ .02	59.3	+ 4.6	92	8	76	22	28	43	47	46	38	60	0.34	− 1.1	3	7,904	se.	40	se.	2	23	6	2	2.4	0.3
Wichita	1,358	98	121	28.63	30.07	+ .04	61.3	+ 2.5	93	1	74	26	28	48	38	50	41	56	0.52	− 1.8	3	5,959	se.	30	ne.	5	19	8	4	3.2	....
Oklahoma	1,214	10	47	28.77	30.05	+ .02	62.8	+ 1.5	94	1	75	28	28	50	33	52	46	64	1.31	− 0.5	6	10,248	s.	50	n.	26	20	8	3	2.9	
Southern Slope.							**63.0**	**+ 0.6**									**56**	**1.56**	**− 0.2**									**3.3**	
Abilene	1,738	10	52	28.25	30.05	+ .04	65.2	+ 1.0	93	13	77	34	28	53	39	53	45	59	4.62	+ 2.3	5	6,867	s.	34	n.	27	19	4	8	3.4	
Amarillo	3,676	10	49	26.32	30.04	+ .04	60.2	+ 4.1	94	4	76	28	28	45	45	47	39	58	0.26	− 1.4	3	8,306	s.	36	n.	27	23	7	1	3.2	1.6
Del Rio	944	8	57	29.04	30.02	+ .04	69.1	− 0.8	97	13	82	36	22	56	40	.....	.....	.....	1.01	− 0.5	6	5,377	se.	35	w.	3	17	7	7	3.9	
Roswell	3,578	9	57	26.44	30.06	+ .10	57.4	− 2.1	90	1	75	24	28	40	48	45	37	58	0.36	− 1.2	3	3,587	s.	29	nw.	2	21	7	3	2.6	T.
Southern Plateau.							**60.7**	**+ 0.8**									**43**	**0.36**	**− 0.6**									**2.2**	
El Paso	3,762	110	133	26.23	29.96	+ .04	63.5	+ 1.1	90	1	77	35	21	50	39	47	29	33	0.02	− 0.9	2	7,546	e.	41	nw.	1	24	7	0	2.0	
Santa Fe	7,013	8	56	23.34	30.05	+ .09	49.5	− 0.5	80	8	62	20	28	37	36	37	28	51	0.40	− 0.7	5	6,370	ne.	36	se.	15	20	8	3	3.0	0.4
Flagstaff	6,907	8	57	23.42	29.99	+ .07	47.2	+ 2.5	81	9	64	16	21	31	48	36	24	50	0.54	− 1.4	6	5,582	e.	47	sw.	12	17	10	4	2.9	
Phoenix	1,108	50	56	28.75	29.89	+ .01	72.2	+ 2.0	102	8	87	45	17	57	43	56	43	39	0.18	− 0.2	2	2,885	e.	23	w.	1	19	12	0	2.0	
Yuma	141	9	58	29.73	29.88	+ .01	73.1	+ 0.7	106	8	90	44	13	56	46	56	45	44	0.07	− 0.1	1	4,214	w.	32	n.	19	29	2	0	0.8	
Independence	3,910	11	42	26.04	30.02	+ .07	58.6	− 0.7	88	9	73	34	12	44	46	46	38	43	0.38	0.0	3	4,936	n.	38	s.	10	22	6	3	2.8	
Middle Plateau.							**51.5**	**+ 1.0**									**52**	**1.45**	**+ 0.5**									**3.2**	
Reno	4,532	56	63	25.53	30 05	+ .06	53.2	+ 3.5	84	8	69	29	14	38	44	42	34	56	0.71	+ 0.3	3	3,981	w.	43	w.	3	20	6	5	2.6	T.
Tonopah	6,090	12	20	24.13	30.01	.....	53.8	.....	79	9	63	32	13	44	27	41	27	41	0.35	− 0.5	5	5,794	se.	37	se.	11	17	9	5	3.3	T.
Winnemucca	4,344	18	56	25.70	30.11	+ 06	50.2	+ 1.6	85	10	68	24	29	32	48	41	34	63	0.96	+ 0.4	6	4,432	ne.	38	sw.	3	22	4	5	2.9	
Modena	5,479	10	43	24.69	30.05	+ .09	49.6	− 0.5	82	9	65	22	28	34	45	38	26	48	1.35	+ 0.5	5	7,011	w.	48	sw.	11	17	8	6	3.7	
Salt Lake City	4,360	147	189	25.71	30.08	+ .07	54.2	+ 2.0	88	10	65	35	28	44	32	43	32	47	2.64	+ 1.2	8	5,060	se.	40	nw.	4	19	5	7	3.1	
Durango	6,546	18	56	23.74	30.05	+ .08	48.7	− 0.2	83	9	64	19	21	34	46	38	29	58	2.91	+ 1.2	9	4,101	nw.	24	nw.	2	15	10	6	4.0	3.4
Grand Junction	4,608	43	51	25.47	30.01	+ .02	53.0	− 0.3	85	10	67	27	20	39	43	40	30	49	1.26	+ 0.4	6	2,998	nw.	21	se.	14	20	6	5	2.9	
Northern Plateau.							**53.2**	**+ 3.0**									**56**	**1.21**	**− 0.1**									**4.2**	
Boise	2,739	78	86	27.26	30.13	+ .07	53.5	+ 3.2	88	8	66	31	27	41	41	44	34	54	0.99	− 0.3	6	3,541	n.	30	se.	11	14	12	5	3.7	
Lewiston	757	10	51	29.27	30.08	+ .01	54.7	+ 2.9	80	6	66	26	27	43	34	.....	.....	.....	1.06	− 0.1	6	2,719	e.	31	nw.	25	12	3	16	5.6	
Pocatello	4,477	46	54	25.57	30.10	+ .06	51.2	+ 3.2	86	10	65	19	28	38	47	41	31	49	1.17	+ 0.2	10	6,524	se.	36	sw.	4	18	10	3	3.0	
Spokane	1,929	101	110	28.02	30.08	+ .02	50.8	+ 3.5	77	8	60	23	27	41	30	45	39	65	1.42	− 0.1	6	4,380	sw.	27	sw.	3	6	7	18	6.7	
Walla Walla	1,000	71	79	29.01	30.08	+ .01	56.0	+ 2.3	80	8	66	27	27	46	29	48	40	57	1.39	− 0.1	8	3,939	s.	26	w.	3	13	9	9	4.8	
N. Pac. Coast Reg.							**52.4**	**+ 1.3**									**84**	**4.73**	**+ 0.7**									**7.3**	
North Head	211	11	56	29.85	30.08	+ .03	52.6	− 0.3	68	19	56	41	26	50	19	50	48	88	4.05	+ 0.1	19	13,995	se.	76	se.	2	3	8	20	8.0	
Port Crescent	259	8	53	29.79	30.07	+ .05	47.8	+ 0.4	64	6	54	29	28	42	22	.....	.....	.....	4.88	+ 1.4	18	3,192	s.	16	s.	3	0	16	15	7.2	
Seattle	123	185	224	29.95	30.08	+ .03	52.8	+ 2.0	66	28	58	36	26	48	28	51	49	89	4.02	+ 1.1	19	6,589	s.	38	s.	24	2	6	23	8.3	

TABLE 1.—*Climatological data for U. S. Weather Bureau stations, October, 1910*—Continued.

Stations.	Elevation of instruments.			Pressure, in inches.			Temperature of the air, in degrees Fahrenheit.								Mean wet thermometer.	Mean temperature of the dew-point.	Mean relative humidity, per cent.	Precipitation, in inches.			Wind.				Clear days.	Partly cloudy days.	Cloudy days.	Average cloudiness during daylight, tenths.	Total snowfall.
	Barometer above sea level, feet.	Thermometers above ground.	Anemometer above ground.	Actual, reduced to mean of 24 hours.	Sea level, reduced to mean of 24 hrs.	Departure from normal.	Mean max. + mean min. ÷ 2.	Departure from normal.	Maximum.	Date.	Mean maximum.	Minimum.	Date.	Mean minimum.	Greatest daily range.				Total.	Departure from normal.	Days with .01, or more.	Total movement, miles.	Prevailing direction.	Maximum velocity. Miles per hour.	Maximum velocity. Direction.	Maximum velocity. Date.				
N.P.Coast Reg.-Con.																													
Tacoma	213	113	120	29.85	30.08	+ .04	52.6	+ 2.0	66	19	59	31	26	46	27	50	48	85	5.22	+ 1.8	19	4,296	sw.	26	sw.	3	6	5	20	7.7	
Tatoosh Island	86	7	57	29.94	30.03	+ .02	51.2	+ 1.3	60	15	54	43	26	48	12	49	47	89	8.82	+ 0.8	23	11,463	ne.	68	se.	7	5	7	19	7.7	
Portland, Oreg.	153	68	105	29.93	30.09	+ .03	56.0	+ 2.7	75	8	62	40	26	50	24	51	47	75	3.44	− 0.2	13	5,014	nw.	30	s.	3	3	11	17	7.0	
Roseburg	510	9	57	29.55	30.10	+ .02	54.0	+ 1.2	79	8	64	35	27	44	34	51	47	80	2.71	+ 0.1	10	1,864	nw.	17	w.	17	7	18	6	5.3	
Mid. Pac. Coast Reg.							61.2	+ 1.7										65	0.51	− 0.9									4.1	
Eureka	62	62	80	30.04	30.11	+ .05	52.9	− 0.2	66	8	58	42	28	48	21	50	49	89	0.82	− 1.8	7	3,275	nw.	24	sw.	3	8	9	14	5.9	
Mount Tamalpais	2 375	11	18	27.58	30.04	+ .03	60.6	.....	87	7	68	40	12	54	29	50	40	55	0.91	− 0.4	3	12,644	nw.	72	nw.	1	17	6	8	3.7	
Point Reyes Light	490	7	18	29.47	29.99	.....	55.1	.....	78	7	60	44	1	50	27	.....	.....	.....	0.27	.....	5	13,919	n.	72	nw.	1	11	5	15	5.6	
Red Bluff	332	50	55	29.64	29.99	− .04	66.3	+ 2.5	92	7	79	45	31	54	34	55	45	51	0.30	− 1.3	4	4,550	nw.	35	nw.	18	25	3	3	2.3	
Sacramento	69	105	117	29.92	29.98	− .01	64.6	+ 2.4	93	8	78	44	31	52	33	54	46	57	0.28	− 0.8	2	5,146	s.	25	n.	18	22	5	4	2.5	
San Francisco	155	200	204	29.85	30.02	+ .01	61.2	+ 2.8	89	7	69	47	28	53	29	53	48	73	0.65	− 0.6	3	4,897	w.	30	sw.	26	16	9	6	3.9	
San Jose	141	12	110	29.86	30.01	.....	61.2	+ 0.9	91	7	75	40	23	47	42	.....	.....	.....	0.20	− 0.7	2	3,841	nw.	24	sw.	15	18	7	6	3.4	
Southeast Farallon	30	9	17	30.01	30.04	.....	53.2	.....	66	19	55	47	28	51	12	.....	.....	.....	0.39	− 0.9	6	10,599	nw.	46	n.	1	10	10	11	5.3	
S. Pac. Coast Reg.							63.5	+ 3.2										62	0.73	− 0.1									2.3	
Fresno	330	67	70	29.63	29.98	+ .02	66.8	+ 2.1	98	8	80	46	31	53	37	54	46	55	0.45	− 0.3	3	2,946	nw.	21	w.	1	20	7	4	2.8	
Los Angeles	338	159	191	29.60	29.96	+ .01	67.2	+ 4.9	96	24	77	49	12	57	31	57	51	68	0.82	0.0	5	4,054	sw.	24	sw.	11	23	5	3	2.5	
San Diego	87	94	102	29.86	29.95	− .03	64.0	+ 1.0	87	24	71	50	13	57	33	59	57	83	1.35	+ 0.9	3	3,830	nw.	21	nw.	17	22	5	4	2.5	
San Luis Obispo	201	47	54	29.79	30.00	+ .01	64.0	+ 4.8	95	24	78	42	28	50	43	54	47	65	0.30	− 1.0	5	3,456	nw.	22	n.	4	17	8	6	3.6	
West Indies.																														
Grand Turk	11	6	20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
San Juan	82	48	90	29.84	29.92	+ .02	79.6	.....	88	11	86	71	25	74	14	.....	.....	.....	2.27	− 3.9	12	5,670	e.	28	ne.	3	17	7	7	4.0	
Panama.																														
Christobal	17	5	60	29.84	29.86	.....	78.5	.....	89	1	84	70	25	73	17	75	74	90	15.65	+ 1.5	22	4,910	se.	36	sw.	5	1	17	13	6.6	
Culebra	404	4	30	29.44	29.86	.....	78.0	.....	89	2	85	69	1	71	19	73	73	93	13.51	+ 2.2	25	3,954	se.	33	ne.	27	1	7	23	7.7	
Ancon	92	6	69	29.76	29.85	.....	78.5	.....	90	30	85	70	30	72	20	74	74	91	8.86	− 1.6	22	5,362	s.	26	s.	17	0	20	11	8.4	
Alhajuela	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	15.37	+ 1.8	24	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bohio	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	14.53	− 2.3	26	.....	.....	.....	.....	.....	.....	.....	.....	.....
Gatun	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	16.02	− 0.9	21	.....	.....	.....	.....	.....	.....	.....	.....	.....

† Below sea level.

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, for storms in which the rate of fall equaled or exceeded 0.25 in any 5 minutes, or 0.80 inch in 1 hour, during October, 1910, at all stations furnished with self-registering gages.*

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Abilene, Tex	18	8:35 p. m.	8:55 p. m.	0.79	8:39 p. m.	8:51 p. m.	0.01	0.40	0.74	0.77	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	18–19	D. N. p. m.	D. N. a. m.	1.54	2:39 a. m.	2:55 a. m.	0.75	0.22	0.46	0.60	0.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Albany, N.Y	9	.....	.....	0.17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.16	.....	.....	.....
Alpena, Mich	4	.....	.....	0.76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.26	.....	.....	.....
Amarillo, Tex	19	.....	.....	0.05	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.02	.....	.....	.....
Anniston, Ala	6	2:20 p. m.	D. N. p. m.	1.40	3:05 p. m.	4:10 p. m.	0.02	0.13	0.29	0.34	0.41	0.54	0.58	0.70	0.74	0.76	0.78	0.92	1.10	.....	.....
Asheville, N. C	6–7	5:45 p. m.	5:50 a. m.	1.60	3:20 a. m.	3:58 a. m.	0.65	0.12	0.20	0.29	0.40	0.45	0.51	.....	.....	.....	.....	.....	.....	.....	.....
Atlanta, Ga	7	7:25 a. m.	2:45 p. m.	1.34	12:28 p. m.	12:51 p. m.	0.88	0.06	0.17	0.34	0.42	0.45	.....	.....	.....	.....	.....	.....	.....	.....	.....
Atlantic City, N. J	20	.....	.....	1.06	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.43	.....	.....	.....
Augusta, Ga	7–8	2:20 p. m.	1:00 p. m.	3.53	10:39 p. m.	10:47 p. m.	0.56	0.08	0.20	0.35	0.45	0.56	0.63	0.73	0.81	.....	.....	.....	.....	.....	.....
Baltimore, Md	22	.....	.....	0.81	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.60	.....	.....	.....
Bentonville, Ark	5	.....	.....	0.35	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.30	.....	.....	.....
Binghamton, N. Y	20	6:45 a. m.	8:30 a. m.	0.78	7:10 a. m.	7:35 a. m.	0.21	0.20	0.31	0.37	0.42	0.50	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birmingham, Ala	27	.....	.....	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.31	.....	.....	.....
Bismarck, N. Dak	18	.....	.....	0.73	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.40	.....	.....	.....
Block Island, R. I	20	.....	.....	1.17	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.40	.....	.....	.....
Boise, Idaho	3	.....	.....	0.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.18	.....	.....	.....
Boston, Mass	25	.....	.....	0.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.18	.....	.....	.....
Buffalo, N. Y	6	.....	.....	1.38	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.44	.....	.....	.....
Burlington, Vt	6	.....	.....	0.51	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.19	.....	.....	.....
Cairo, Ill	3–4	7:05 p. m.	12:45 p. m.	5.64	4:18 a. m.	7:18 a. m.	1.78	0.07 1.03 2.13 2.80	0.15 1.20 2.18 2.90	0.22 1.33 2.21 3.02	0.29 1.49 2.32 3.14	0.45 1.60 2.41 3.23	0.51 1.72 2.52 3.34	0.55 1.83 2.60	0.65 1.93 2.67	0.79 2.02 2.70	0.99 2.10 2.74	.....	.....	.....	.....
Do	4–5	8:10 p. m.	D. N. a. m.	0.96	12:47 a. m.	1:03 a. m.	0.08	0.21	0.34	0.49	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	5–6	7:55 a. m.	9:30 a. m.	4.17	8:51 a. m.	9:40 a. m.	0.29	0.14	0.25	0.31	0.35	0.43	0.46	0.55	0.61	0.66	0.77	.....	.....	.....	.....
Canton, N. Y	6	.....	.....	1.74	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.32	.....	.....	.....
Charles City, Iowa	3	.....	.....	0.14	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.10	.....	.....	.....
Charleston, S. C	7–8	7:35 p. m.	6:35 a. m.	1.68	12:07 a. m.	12:27 a. m.	0.57	0.13	0.27	0.37	0.44	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Do	19	7:15 a. m.	10:00 a. m.	1.62	8:48 a. m.	9:37 a. m.	0.43	0.06	0.15	0.26	0.30	0.41	0.53	0.68	0.94	1.09	1.16	.....	.....	.....	.....
Charlotte, N. C	7	.....	.....	1.67	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Chattanooga, Tenn	27	.....	.....	0.61	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.31	.....	.....	.....
Cheyenne, Wyo	17	.....	.....	0.76	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....
Chicago, Ill	3	.....	.....	0.96	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.47	.....	.....	.....
Cincinnati, Ohio	5–6	6:20 a. m.	7:55 a. m.	4.68	4:41 p. m. 3:09 a. m.	5:21 p. m. 3:49 a. m.	0.32 2.46	0.09 0.11	0.16 0.24	0.23 0.41	0.30 0.51	0.39 0.62	0.49 0.71	0.55 0.79	0.64 0.86	.....	.....	.....	.....	.....	.....
Cleveland, Ohio	5	.....	.....	1.43	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.36	.....	.....	.....
Columbia, Mo	21	.....	.....	0.30	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	*	.....	.....	.....
Columbia, S. C	7	.....	.....	1.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.27	.....	.....	.....
Columbus, Ohio	5	.....	.....	2.84	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.53	.....	.....	.....
Concord, N. H	22	.....	.....	0.33	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.11	.....	.....	.....
Concordia, Kans	3	.....	.....	0.25	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.13	.....	.....	.....
Corpus Christi, Tex	10	.....	.....	0.11	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.08	.....	.....	.....
Davenport, Iowa	20	.....	.....	0.37	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.10	.....	.....	.....
Del Rio, Tex	3	1:50 a. m.	3:50 a. m.	0.71	2:16 a. m.	2:46 a. m.	0.08	0.06	0.25	0.39	0.41	0.41	0.51	.....	.....	.....	.....	.....	.....	.....	.....
Denver, Colo	16	.....	.....	0.07	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.06	.....	.....	.....
Des Moines, Iowa	3	.....	.....	0.42	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.19	.....	.....	.....
Detroit, Mich	6	.....	.....	0.72	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.15	.....	.....	.....
Devils Lake, N. Dak	18	.....	.....	0.57	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.14	.....	.....	.....
Dodge City, Kans	17	.....	.....	0.16	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.16	.....	.....	.....
Dubuque, Iowa	3	.....	.....	0.20	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.10	.....	.....	.....
Duluth, Minn	18	.....	.....	0.29	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	0.15	.....	.....	.....

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, etc.*—Continued.

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Durango, Colo	15–16			0.85														*			
Eastport, Me	23			0.33														0.09			
Elkins, W. Va	22			0.53														0.28			
El Paso, Tex	19			0.01														0.01			
Erie, Pa	21			0.70														0.59			
Escanaba, Mich	2			0.80														0.22			
Eureka, Cal	3			0.52														0.23			
Evansville, Ind	3–4	10:21 p. m.	12:50 p. m.	3.74	‡8:13 p. m.	9:03 a. m.	1.38	0.11	0.22	0.31	0.35	0.37	0.46	0.56	0.69	0.79	0.86				
					‡9:38 a. m.	10:28 a. m.	2.32	0.07	0.14	0.33	0.41	0.51	0.63	0.77	0.95	1.15	1.23				
Do	4–6	10:20 p. m.	2:00 p. m.	7.14	‡3:45 a. m.	4:35 a. m.	0.51	0.05	0.16	0.37	0.47	0.53	0.58	0.62	0.68	0.79	0.87				
					‡6:08 a. m.	6:48 a. m.	1.66	0.15	0.32	0.42	0.44	0.58	0.75	0.88	0.95						
Flagstaff, Ariz	11			0.16														0.15			
Fort Smith, Ark	5	4:24 p. m.	6:35 p. m.	1.10	4:40 p. m.	4:56 p. m.	0.03	0.13	0.39	0.73	0.79										
Fort Worth, Tex	19			0.28														0.22			
Fresno, Cal	11			0.42														0.16			
Galveston, Tex	4	8:02 a. m.	10:45 a. m.	0.49	8:06 a. m.	8:14 a. m.	0.01	0.30	0.40												
Do	5–6	11:35 p. m.	5:40 a. m.	6.62	12:42 a. m.	2:27 a. m.	0.07	0.17	0.36	0.58	0.94	1.22	1.47	1.74	1.83	1.89	2.09	2.27	4.07	5.99	6.28
Grand Haven, Mich	3			0.55														0.24			
Grand Junction, Colo	15			0.58														0.24			
Grand Rapids, Mich	3	3:04 p. m.	4:01 p. m.	0.43	3:22 p. m.	3:32 p. m.	0.02	0.25	0.36												
Green Bay, Wis	3			0.17														0.13			
Hannibal, Mo	3			0.59														0.28			
Harrisburg, Pa	7			0.45														0.25			
Hartford, Conn	9			0.12														0.11			
Hatteras, N. C	7			0.66														0.25			
Havre, Mont	18			0.04														0.02			
Helena, Mont	25			0.24														0.12			
Houghton, Mich	13			0.53														0.32			
Huron, S. Dak	18			0.40														0.17			
Independence, Cal	15			0.23														0.07			
Indianapolis, Ind	5			2.93														0.49			
Iola, Kans	3			1.10														0.25			
Jacksonville, Fla	8	8:55 p. m.	D. N. p. m.	0.54	9:06 p. m.	9:21 p. m.	0.02	0.14	0.40	0.47											
Do	18–19	8:00 a. m.	4:30 p. m.	5.04	3:42 p. m.	4:53 p. m.	2.10	0.10	0.22	0.28	0.29	0.31	0.35	0.42	0.51	0.75	0.88	1.17	1.37		
Jupiter, Fla	3	5:43 p. m.	11:35 p. m.	1.36	6:44 p. m.	7:05 p. m.	0.11	0.15	0.37	0.57	0.64										
Do	4	11:34 a. m.	12:10 p. m.	0.51	11:38 a. m.	11:58 a. m.	0.01	0.13	0.32	0.40	0.47										
Do	12	7:17 a. m.	8:00 p. m.	0.83	7:28 a. m.	7:50 a. m.	0.01	0.19	0.49	0.66	0.77	0.81									
Do	14–18†	6:25 a. m.	3:30 a. m.	14.27	4:49 a. m.	5:39 a. m.	6.16	0.32	0.43	0.49	0.53	0.56	0.57	0.59	0.61	0.62	0.66				
					5:39 a. m.	6:29 a. m.	.....	0.81	1.01	1.09	1.11	1.13	1.15	1.18	1.25	1.30	1.51				
					6:29 a. m.	7:19 a. m.	.....	1.73	1.83	1.85	1.87	1.87	1.92	2.01	2.17	2.30	2.56				
					7:19 a. m.	7:40 a. m.	.....	2.62	2.66	2.71	2.79										
Kalispell, Mont	7			0.35														0.15			
Kansas City, Mo	3			0.23														0.05			
Keokuk, Iowa	3			0.40														0.22			
Key West, Fla	17			4.08														0.62			
Knoxville, Tenn	21			0.68														0.47			
La Crosse, Wis	21			0.26														0.06			
Lander, Wyo	18–19			0.19														*			
La Salle, Ill	3			0.51														0.43			
Lewiston, Idaho	1			0.26														0.12			
Lexington, Ky	6			1.07														0.19			
Lincoln, Nebr	3			1.04														0.57			
Little Rock, Ark	3–4	D. N. p. m.	9:20 a. m.	2.87	12:45 a. m.	2:13 a. m.	0.04	0.09	0.29	0.31	0.33	0.34	0.42	0.48	0.54	0.63	0.69	0.93	1.41	1.56	
Do	27	D. N. a. m.	D. N. a. m.	0.56	2:01 a. m.	2:18 a. m.	0.01	0.14	0.30	0.36	0.40										
Los Angeles, Cal	14			0.52														0.33			
Louisville, Ky	4	2:00 p. m.	8:00 p. m.	0.94	2:22 p. m.	2:52 p. m.	0.01	0.16	0.37	0.48	0.52	0.58	0.68								
Do	5–6	8:45 a. m.	6:50 p. m.	5.38	1:34 p. m.	2:19 p. m.	3.37	0.14	0.20	0.26	0.34	0.45	0.54	0.64	0.69	0.75					
Lynchburg, Va	7–8			2.65														0.47			
Macon, Ga	7	2:33 p. m.	9:15 p. m.	1.95	5:48 p. m.	6:23 p. m.	0.70	0.20	0.31	0.40	0.47	0.55	0.70	0.79							
Madison, Wis	20			0.20														0.10			
Marquette, Mich	3			0.57														0.54			
Memphis, Tenn	5–6	4:25 p. m.	5:45 a. m.	3.84	7:41 p. m.	8:13 p. m.	1.32	0.24	0.37	0.44	0.52	0.56	0.72	0.76							
Do	13	5:40 a. m.	10:20 a. m.	0.90	7:31 a. m.	8:08 a. m.	0.15	0.22	0.33	0.38	0.38	0.38	0.40	0.62	0.65						
Do	13–14	11:18 p. m.	D. N. a. m.	0.72	11:22 p. m.	11:33 p. m.	0.01	0.25	0.57	0.62											
Meridian, Miss	4	3:09 p. m.	3:43 p. m.	0.57	3:09 p. m.	3:24 p. m.	T.	0.16	0.37	0.54											
Do	6	8:27 a. m.	5:20 p. m.	1.25	8:45 p. m.	9:05 a. m.	0.02	0.17	0.25	0.47	0.54										
Milwaukee, Wis	4			0.34														0.21			
Minneapolis, Minn	2			0.43														0.28			
Mobile, Ala	3	10:54 a. m.	12:50 p. m.	1.45	11:04 a. m.	12:07 p. m.	0.02	0.30	0.53	0.66	0.67	0.67	0.72	0.77	0.90	1.04	1.16	1.32			
Do	6	D. N. a. m.	6:30 a. m.	1.23	3:16 a. m.	4:17 a. m.	0.02	0.29	0.42	0.45	0.45	0.45	0.45	0.45	0.52	0.71	0.80	0.99			
Do	6–7	6:45 a. m.	2:50 p. m.	3.29	8:36 a. m.	9:16 a. m.	0.03	0.30	0.50	0.60	0.62	0.63	0.71	0.82	0.91						
Do	27	1:50 p. m.	7:20 p. m.	1.33	4:13 p. m.	4:36 p. m.	0.62	0.09	0.20	0.37	0.53	0.60									
Modena, Utah	15			1.04														0.27			
Montgomery, Ala	27	11:53 a. m.	2:56 p. m.	0.68	12:50 p. m.	12:59 p. m.	0.01	0.34	0.41												
Moorhead, Minn	18–19			0.38														*			
Mt. Tamalpais, Cal	11			0.54														0.11			
Mount Weather, Va	22			1.15														0.56			
Nantucket, Mass	20	8:20 a. m.	5:05 p. m.	3.86	12:09 p. m.	1:09 p. m.	1.24	0.18	0.45	0.77	0.97	1.10	1.32	1.41	1.48	1.73	2.17	2.30			
Nashville, Tenn	6	D. N. a. m.	8:15 p. m.	2.41	3:54 a. m.	5:24 a. m.	0.25	0.08	0.27	0.36	0.47	0.55	0.63	0.70	0.74	0.79	0.82	0.91	1.10	1.24	
New Haven, Conn	20			0.51														0.15			
New Orleans, La	6			0.64														0.40			
New York, N. Y	20	1:30 a. m.	12:20 p. m.	3.04	‡6:15 a. m.	7:20 a. m.	0.75	0.05	0.13	0.23	0.34	0.50	0.58	0.62	0.65	0.68	0.71	0.80	0.85		
					‡8:16 a. m.	8:51 a. m.	1.91	0.05	0.17	0.31	0.47	0.56	0.67	0.76							
Norfolk, Va	19			1.58														0.41			
Northfield, Vt	22			0.28														0.11			
North Head, Wash	16			0.41														0.14			
North Platte, Nebr	18			0.01														0.01			
Oklahoma, Okla	3			0.60														0.28			
Omaha, Nebr	3			0.60														0.24			
Oswego, N. Y	3			0.92														0.29			
Palestine, Tex	3	8:05 a. m.	10:25 a. m.	0.69	9:29 a. m.	9:42 a. m.	0.14	0.17	0.35	0.44											
Parkersburg, W. Va	6			0.66														0.23			
Pensacola, Fla	3	8:50 a. m.	9:55 a. m.	1.22	9:15 a. m.	9:50 a. m.	0.01	0.13	0.14	0.28	0.49	0.75	1.04	1.20							
Peoria, Ill	3–4			0.96														*			
Philadelphia, Pa	20			1.82														0.75			
Phoenix, Ariz	14			0.13														0.13			
Pierre, S. Dak	.....																				
Pittsburg, Pa	21			0.40														0.34			
Pocatello, Idaho	3			0.33														0.23			
Pt. Reyes Light, Cal	12			0.14														0.08			
Port Huron, Mich	21			0.57														0.35			
Portland, Me	25			0.28														0.20			
Portland, Oreg	3			1.07														0.24			

TABLE II.—*Accumulated amounts of precipitation for each 5 minutes, etc.*—Continued.

Stations.	Date.	Total duration. From—	Total duration. To—	Total amount of precipitation.	Excessive rate. Began—	Excessive rate. Ended—	Amount before excessive began.	Depths of precipitation (in inches) during periods of time indicated. 5 min.	10 min.	15 min.	20 min.	25 min.	30 min.	35 min.	40 min.	45 min.	50 min.	60 min.	80 min.	100 min.	120 min.
Providence, R. I.	15			0.39														0.27			
Pueblo, Colo.	2			0.03														0.03			
Raleigh, N. C.	7	12:47 p. m.	D. N. p. m.	1.42	12:49 p. m.	1:36 p. m.	0.01	0.19	0.27	0.31	0.40	0.47	0.48	0.48	0.53	0.64	0.70				
Rapid City, S. Dak.	16			0.09														0.09			
Red Bluff, Cal.	12			0.17														0.04			
Reno, Nev.	11			0.48														0.17			
Richmond, Va.	19			1.73														0.67			
Rochester, N. Y.	25			0.66														0.20			
Roseburg, Oreg.	3			0.90														0.25			
Roswell, N. Mex.	20			0.14														0.05			
Sacramento, Cal.	11			0.27														0.12			
St. Louis, Mo.	5-6	7:30 a. m.	3:30 a. m.	2.82	8:54 a. m.	9:23 a. m.	0.12	0.18	0.38	0.61	0.71	0.84	0.90								
St. Paul, Minn.	2			0.40														0.16			
Salt Lake City, Utah	1			0.64														0.34			
San Antonio, Tex.	3-4	8:20 p. m.	10:32 a. m.	0.76	9:47 a. m.	9:57 a. m.	0.29	0.10	0.30												
San Diego, Cal.	13			0.52														0.33			
Sandusky, Ohio	21	3:53 p. m.	4:45 p. m.	0.44	4:00 p. m.	4:12 p. m.	T.	0.22	0.35	0.38											
San Francisco, Cal.	11			0.39														0.18			
San Jose, Cal.	11			0.10														0.06			
San Luis Obispo, Cal.	12			0.13														0.08			
Santa Fe, N. M.	18-19			0.17														*			
Sault Ste. Marie, Mich.	3	5:42 p. m.	6:47 p. m.	0.70	5:42 p. m.	6:02 p. m.	0.00	0.35	0.51	0.60	0.65										
Savannah, Ga.	7	6:18 p. m.	6:54 p. m.	0.44	6:33 p. m.	6:48 p. m.	0.02	0.10	0.33	0.42											
Scranton, Pa.	22			0.31														0.18			
Seattle, Wash.	3			0.76														0.21			
Sheridan, Wyo.	2			0.48														0.15			
Shreveport, La.	12	5:15 a. m.	10:30 a. m.	1.69	9:23 a. m.	10:13 a. m.	0.23	0.12	0.23	0.43	0.68	0.71	0.92	1.15	1.26	1.37	1.44				
Sioux City, Iowa	3			0.44														0.23			
Southeast Farallon, Cal.	11			0.18														0.07			
Spokane, Wash.	17			0.49														0.20			
Springfield, Ill.	3			0.85														0.40			
Springfield, Mo.	5	10:00 a. m.	2:22 p. m.	1.58	11:50 a. m.	12:20 p. m.	0.37	0.18	0.55	0.73	0.93	0.99	1.04								
Syracuse, N. Y.	6			0.66														0.30			
Tacoma, Wash.	3			1.93														0.27			
Tampa, Fla.	28			0.46														0.41			
Tatoosh Island, Wash.	16			0.84														0.31			
Taylor, Tex.	3	7:53 a. m.	9:15 a. m.	0.72	7:54 a. m.	8:34 a. m.	T.	0.32	0.39	0.39	0.39	0.39	0.48	0.58	0.64						
Do.	9	9:28 p. m.	11:15 p. m.	0.82	9:37 p. m.	10:15 p. m.	0.02	0.07	0.16	0.28	0.32	0.37	0.50	0.64	0.70						
Thomasville, Ga.	3	11:35 a. m.	12:15 p. m.	0.65	11:50 a. m.	12:04 p. m.	0.03	0.24	0.46	0.60											
Do.	4	5:38 p. m.	8:20 p. m.	2.38	5:41 p. m.	6:57 p. m.	0.01	0.20	0.31	0.33	0.33	0.38	0.75	1.13	1.45	1.67	1.89	2.14	2.34		
Toledo, Ohio	21			0.34														0.26			
Tonopah, Nev.	11			0.16														0.14			
Topeka, Kans.	3			1.51														0.75			
Valentine, Nebr.	18			0.13														0.08			
Vicksburg, Miss.	4	5:20, p. m.	6:00 p. m.	0.52	5:27 p. m.	5:49 p. m.	0.01	0.09	0.21	0.36	0.48										
Do.	6	D. N. a. m.	2:00 p. m.	1.60	4:59 a. m.	5:26 a. m.	0.73	0.09	0.15	0.21	0.37	0.50									
Walla Walla, Wash.	2			0.58														0.23			
Washington, D. C.	19-20	4:37 p. m.	5:30 a. m.	3.67	2:00 a. m.	3:05 a. m.	1.08	0.13	0.29	0.45	0.63	0.87	1.10	1.34	1.60	1.79	2.00	2.29	2.44		
Wichita, Kans.	18			0.44														0.27			
Williston, N. Dak.	2			0.03														*			
Wilmington, N. C.	7			0.57														0.32			
Winnemucca, Nev.	11			0.28														0.17			
Wytheville, Va.	17			0.44														0.44			
Yankton, S. Dak.	18	5:40 p. m.	6:10 p. m.	0.34	5:47 p. m.	5:56 p. m.	0.01	0.16	0.32									*			
Yellowstone Park, Wyo.	12-13			0.43																	

†Excessive amounts occurred on October 16.

TABLE III.—*Data furnished by the Canadian Meteorological Service, October, 1910.*

Stations.	Pressure. Actual, reduced to mean of 24 hours.	Pressure. Sea level, reduced to mean of 24 hours.	Pressure. Departure from normal.	Temperature. Mean.	Temperature. Departure from normal.	Temperature. Mean maximum.	Temperature. Mean minimum.	Precipitation. Total.	Precipitation. Departure from normal.	Precipitation. Total snowfall.
	Ins.	*Ins.*	*Ins.*	°	°	°	°	*Ins.*	*Ins.*	*Ins.*
St. Johns, N. F.	29.67	29.81	−.10	47.2	+ 1.8	54.1	40.4	7.92	+2.57	....
Sydney, C. B. I.	29.80	29.84	−.12	48.3	+ 1.8	55.9	40.7	8.88	+4.19	....
Halifax, N. S.	29.78	29.89	−.11	48.6	+ 1.4	56.1	41.1	8.62	+3.07	....
Grand Manan, N. B.	29.86	29.91	−.09	48.8	+ 1.9	54.9	42.7	2.58	−2.13	T.
Yarmouth, N. S.	29.86	29.93	−.09	49.2	+ 1.6	55.7	42.7	1.95	−2.75	....
Charlottetown, P. E. I.	29.81	29.85	−.11	46.2	− 0.3	52.2	40.2	5.90	+1.00	T.
Chatham, N. B.	29.86	29.88	−.08	45.0	+ 2.0	52.8	37.2	3.78	−0.08	3.6
Father Point, Que.	29.83	29.85	−.10	41.2	+ 1.4	47.3	35.1	4.74	+1.84	1.6
Quebec, Que.	29.59	29.92	−.08	43.5	+ 1.1	50.1	36.9	4.65	+1.51	1.1
Montreal, Que.	29.74	29.95	−.06	47.2	+ 2.4	53.2	41.3	4.79	+1.66	2.0
Stonecliffe, Ont.*	29.35	29.97	−.04	44.1	+ 1.3	54.2	34.1	3.08	+0.65	....
Ottawa, Ont.	29.70	30.02	+.01	46.5	+ 2.7	54.5	38.5	4.07	+1.52	1.1
Kingston, Ont.	29.67	29.98	−.05	49.3	+ 2.3	57.4	41.1	5.20	+2.47	1.9
Toronto, Ont.	29.61	29.93	−.05	51.2	+ 4.6	60.0	42.4	2.31	−0.05	....
White River, Ont.	28.58	29.91	−.07	39.9	+ 2.8	50.1	29.8	3.31	+0.96	0.2
Port Stanley, Ont.	29.36	30.00	−.05	51.2	+ 3.4	60.0	42.4	4.72	+1.74	2.9
Southampton, Ont.	29.27	.....	.....	50.1	+ 4.0	58.3	41.8	4.39	+1.22	1.2
Parry Sound, Ont.	29.29	29.90	−.02	47.6	+ 3.7	56.6	38.7	4.82	+0.90	....
Port Arthur, Ont.	29.21	29.92	−.06	43.5	+ 3.6	52.2	34.8	2.46	−0.10	T.
Winnipeg, Man.	29.08	29.91	−.07	46.8	+ 7.7	57.4	36.1	1.08	−0.62	2.4
Minnedosa, Man.	28.98	29.91	−.06	44.5	+ 6.7	57.0	32.0	0.18	−1.02	0.2
Qu'Appelle, Sask.	27.64	29.89	−.08	44.0	+ 4.6	56.0	32.1	0.12	−0.98	....
Medicine Hat, Alberta.	27.66	29.94	−.03	50.9	+ 6.1	62.1	39.6	0.30	−0.28	....
Swift Current, Sask.	27.36	29.94	−.03	45.8	+ 3.7	57.2	34.4	0.40	−0.48	0.8
Calgary, Alberta.	26.35	29.90	−.05	43.5	+ 3.4	54.1	32.9	0.48	0.00	1.0
Banff, Alberta.	25.35	29.96	+.01	41.0	+ 1.7	48.6	33.4	1.36	+0.34	T.
Edmonton, Alberta.	27.59	29.89	−.04	43.5	+ 2.4	55.4	31.6	0.51	−0.19	0.1
Prince Albert, Sask.	28.39	29.95	−.01	40.0	+ 2.9	51.0	29.1	0.16	−0.67	....
Battleford, Sask.	28.14	29.88	−.09	43.1	+ 3.5	54.6	31.6	0.18	−0.27	....
Kamloops, B. C.	28.68	29.96	.00	48.3	+ 1.3	57.2	39.5	0.66	+0.05	....
Victoria, B. C.	29.96	30.06	+.05	50.9	+ 1.7	55.9	45.8	5.09	+2.72	....
Barkerville, B. C.	25.62	29.95	+.01	34.4	− 5.3	40.3	28.5	4.28	+1.58	3.5
Dawson, Yukon.										....
Hamilton, Bermuda.	29.91	30.07	+ .05	72.9	− 0.1	77.7	68.1	4.92	−1.79	....

*Name changed from Rockliffe.

Climatological Districts of the United States.

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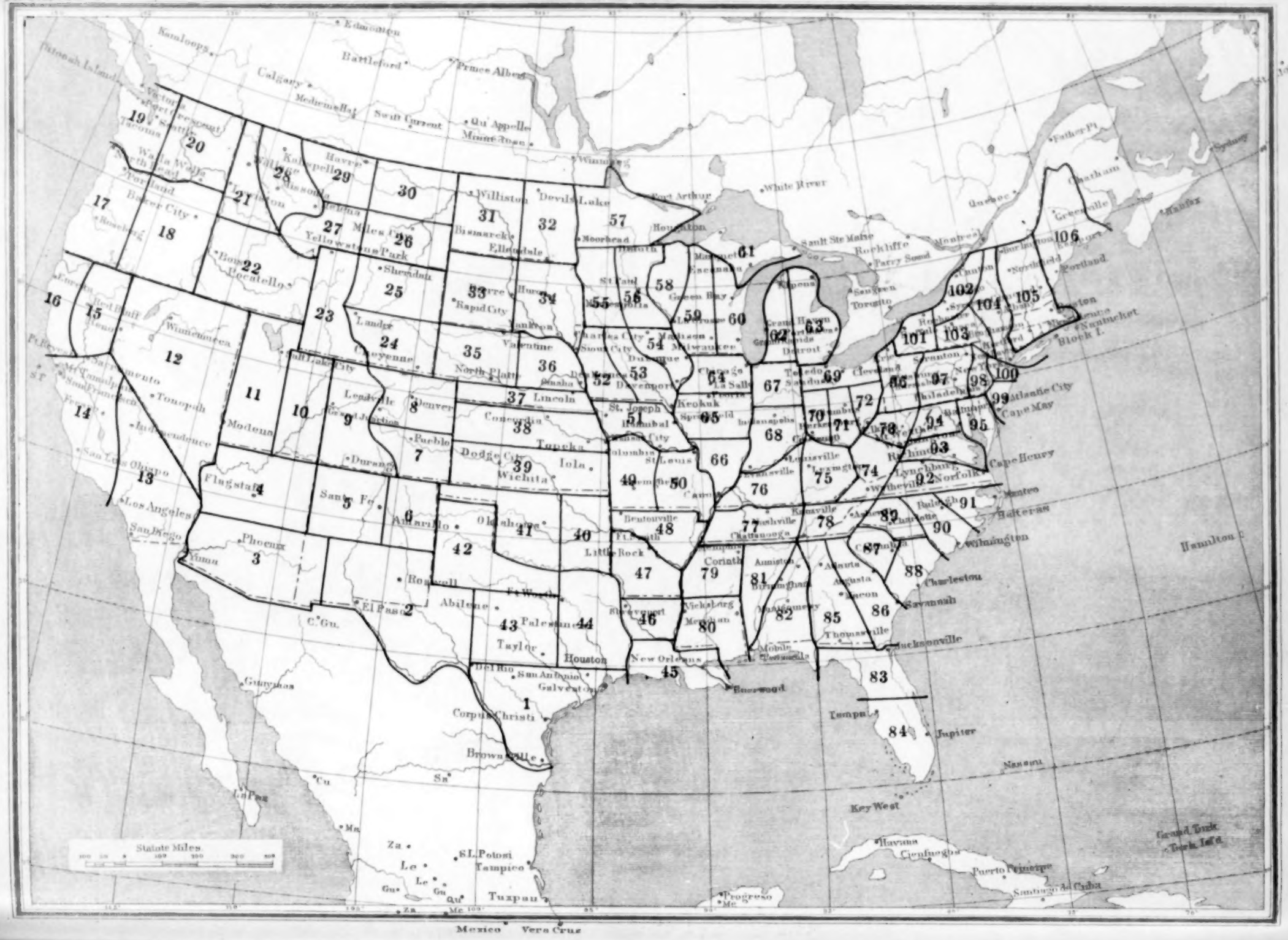
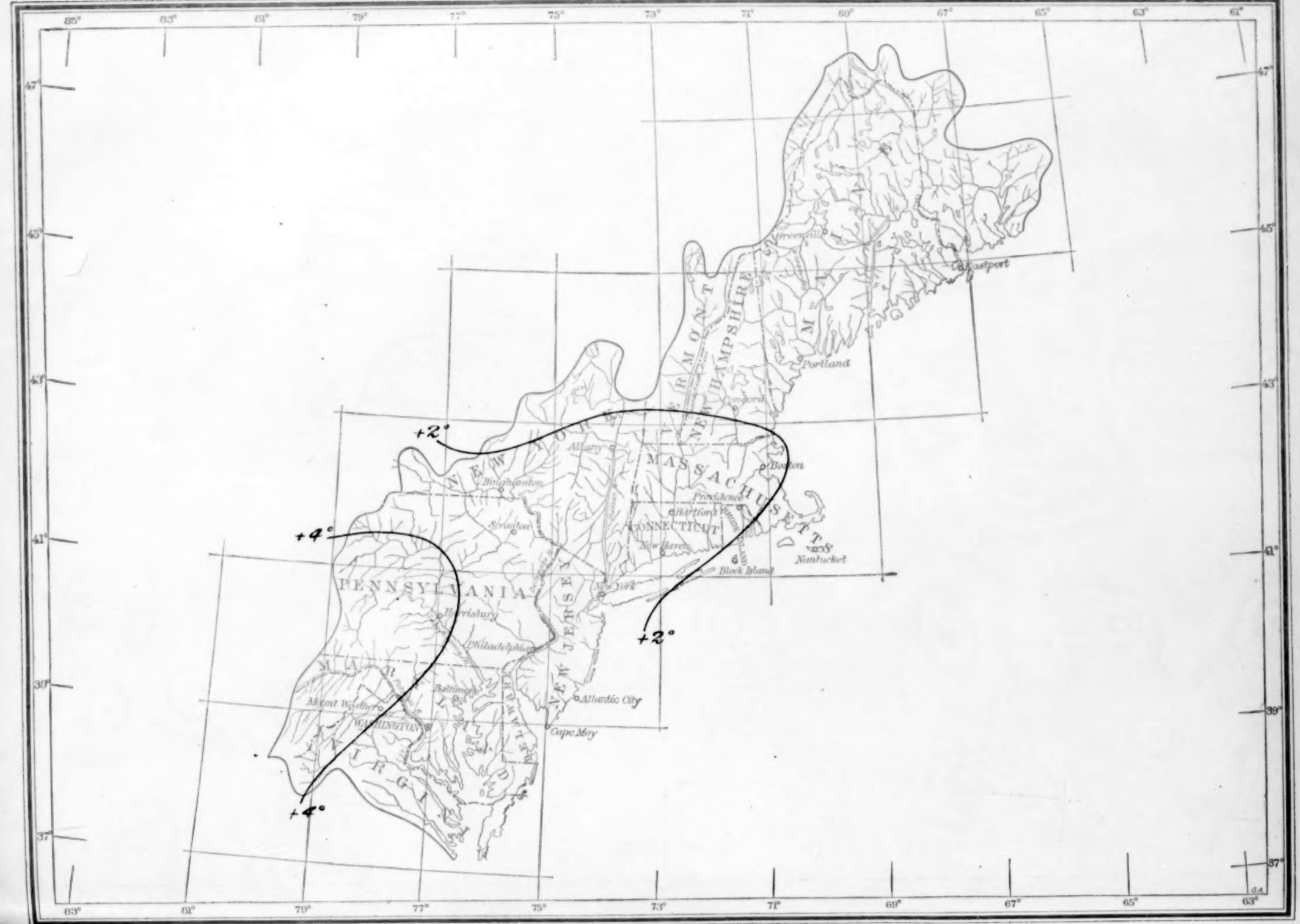


District No. 1.—Total Precipitation, October, 1910

Mexico Vera Cruz

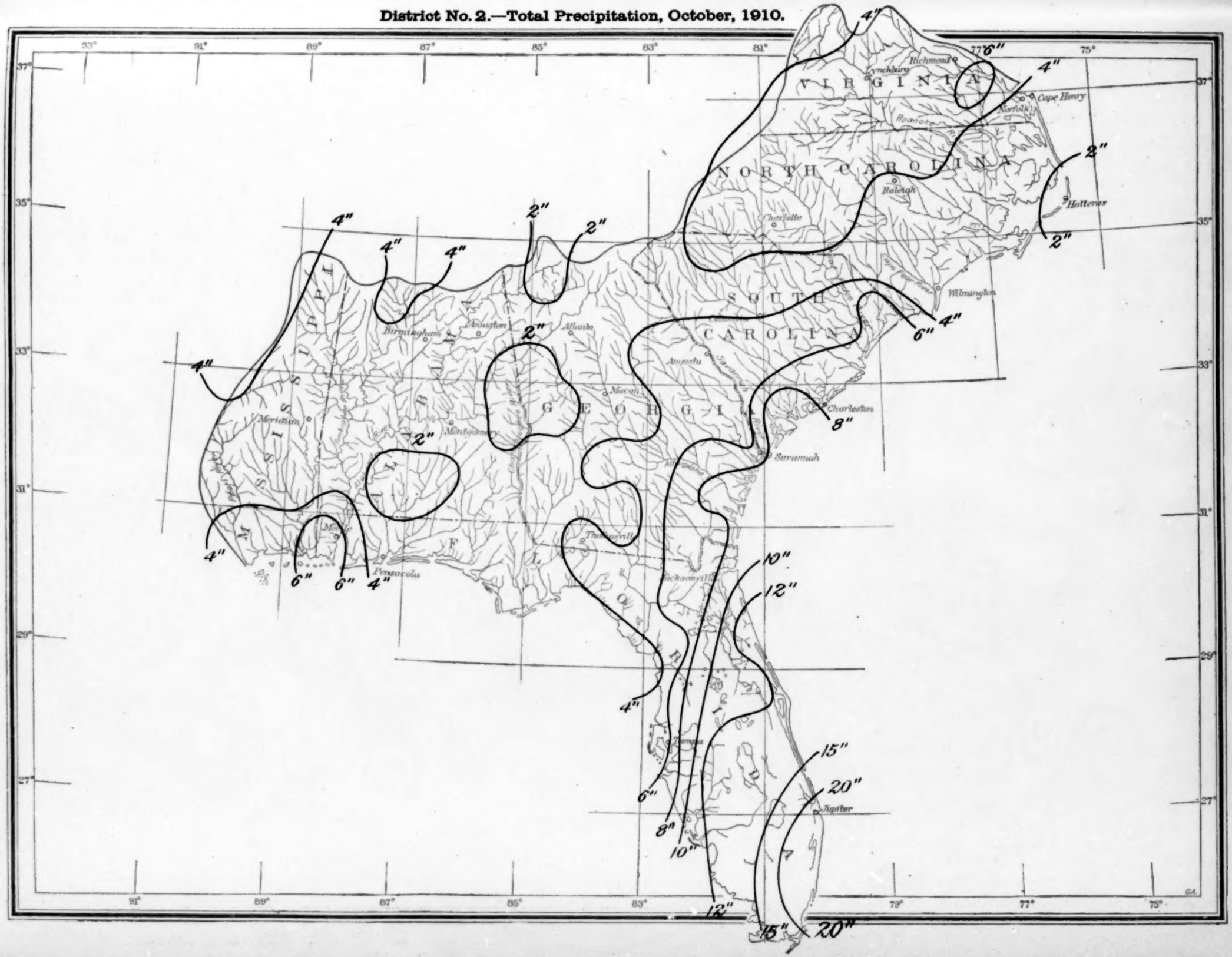
District No. 1.—Total Precipitation, October, 1910.

District No. 1.—Departure of the Mean Temperature from the Normal, October, 1910.



District No. 2.—Total Precipitation, October, 1910.

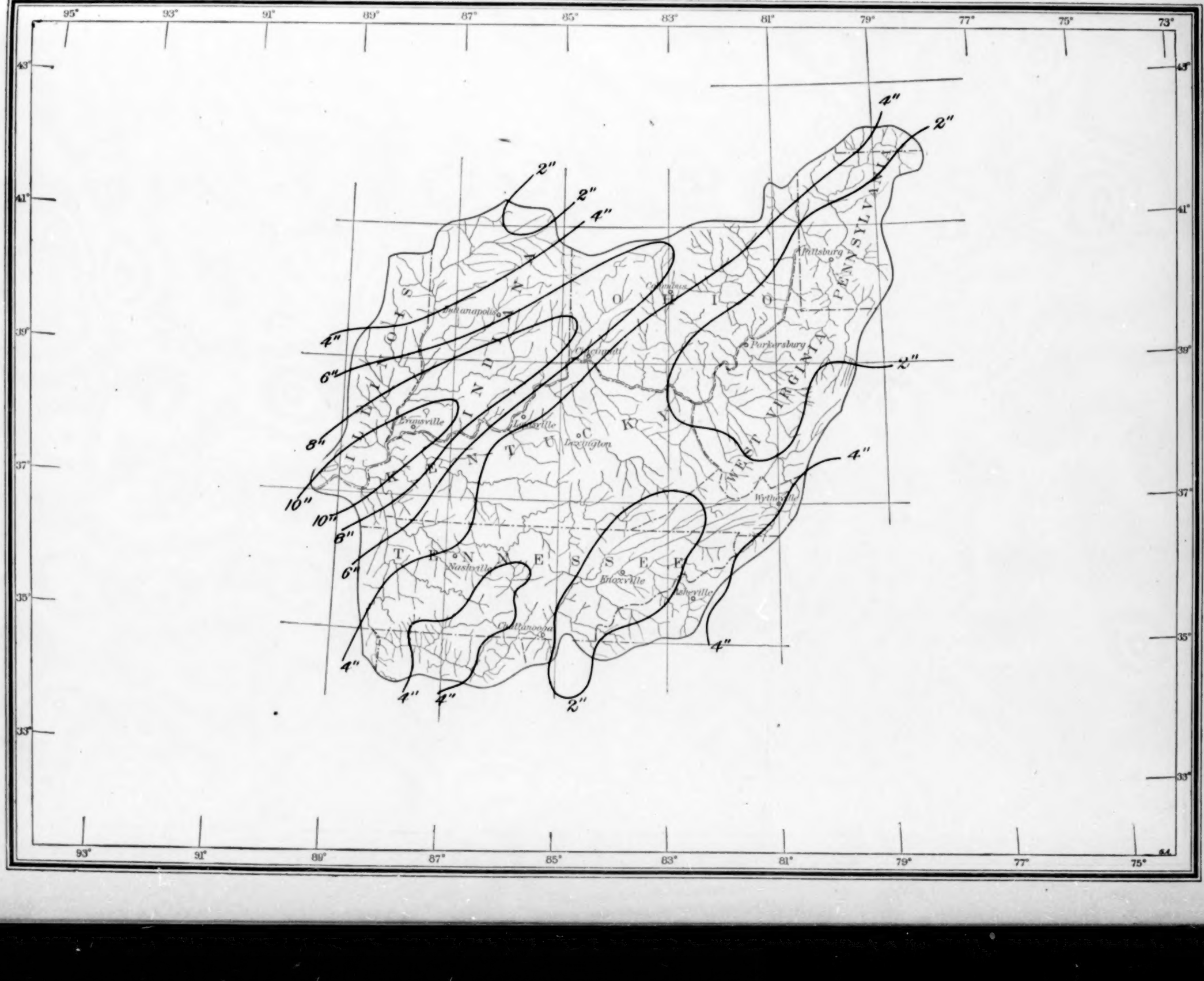
District No. 2.—Total Precipitation, October, 1910.



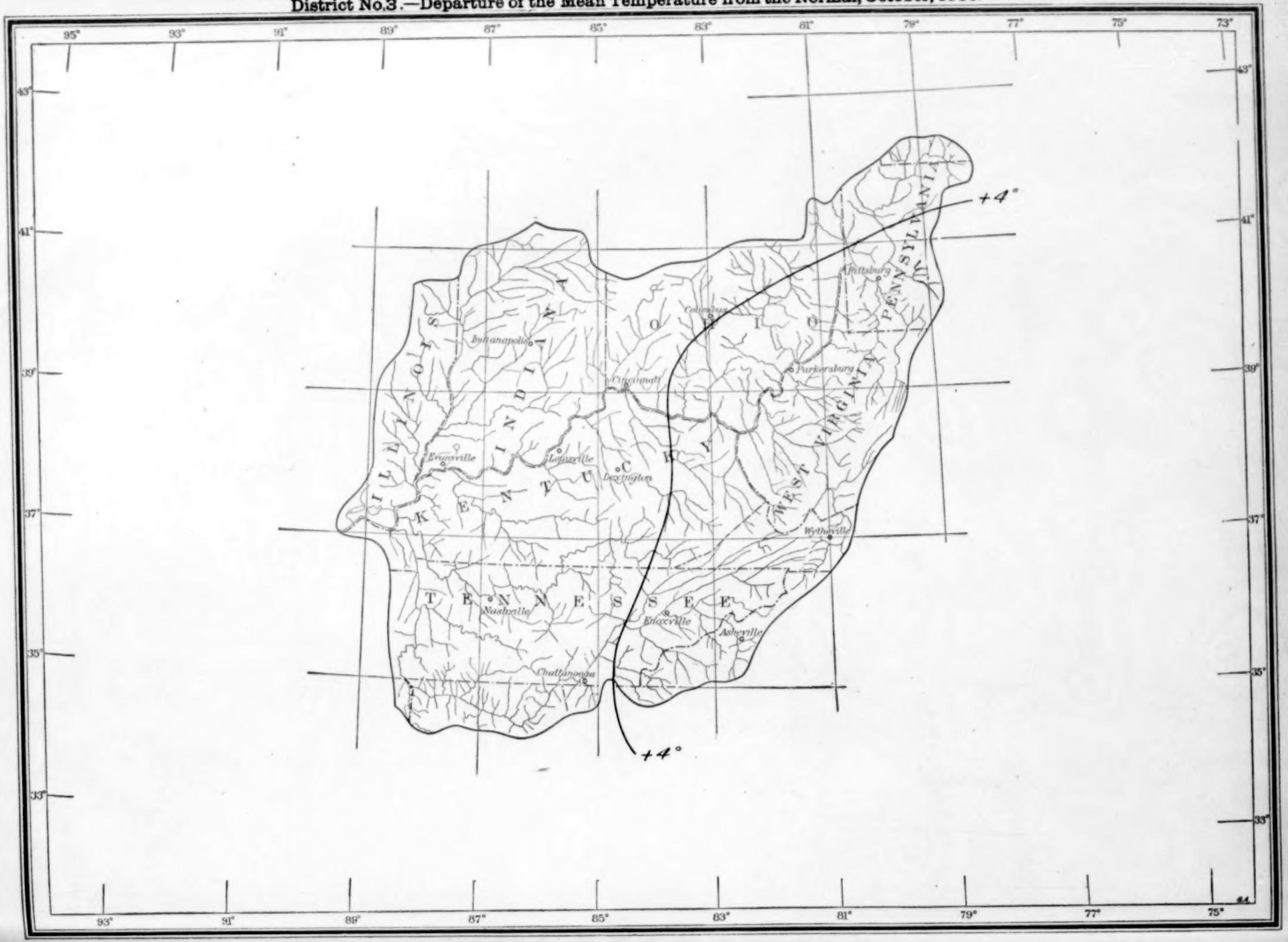
District No.2.—Departure of the Mean Temperature from the Normal, October, 1910.

District No.3.—Total Precipitation, October, 1910.

District No. 3.—Total Precipitation, October, 1910.



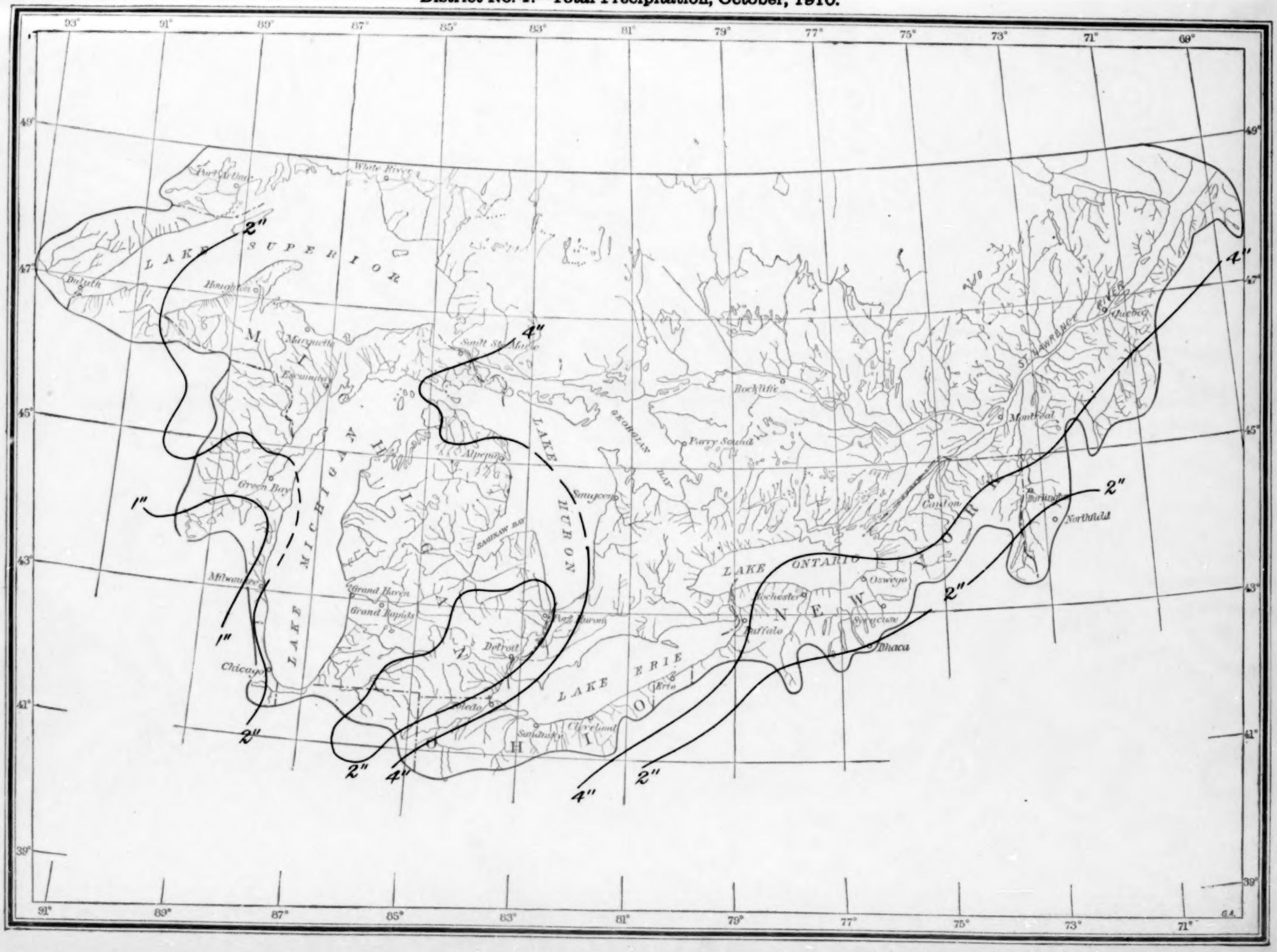
District No. 3.—Departure of the Mean Temperature from the Normal, October, 1910.



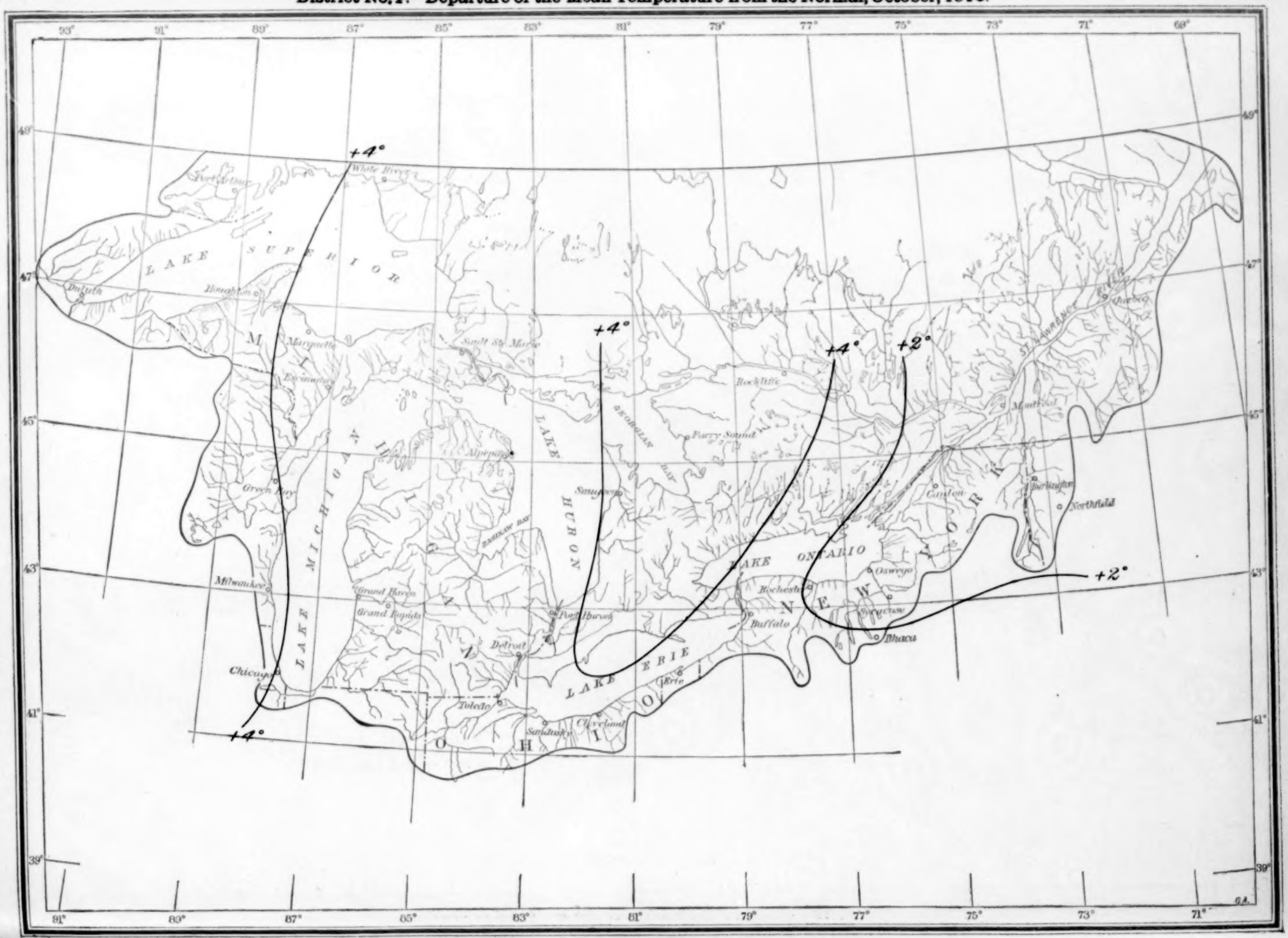
District No. 4.—Total Precipitation, October, 1910.

93° 91° 89° 87° 85° 83° 81° 79° 77° 75°

District No. 4.—Total Precipitation, October, 1910.



District No. 4.—Departure of the Mean Temperature from the Normal, October, 1910.



District No. 5.—Total Precipitation, October, 1910.

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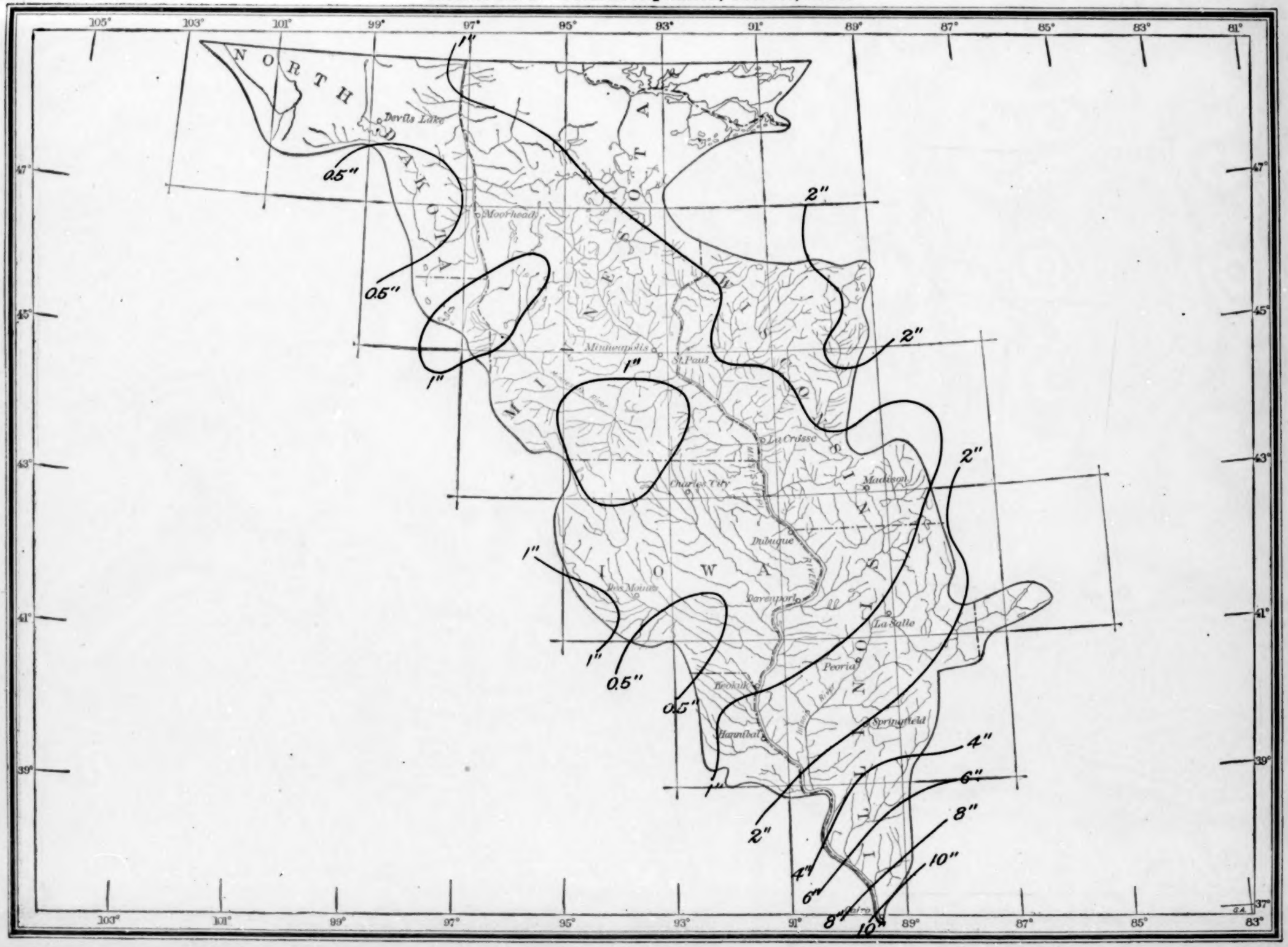
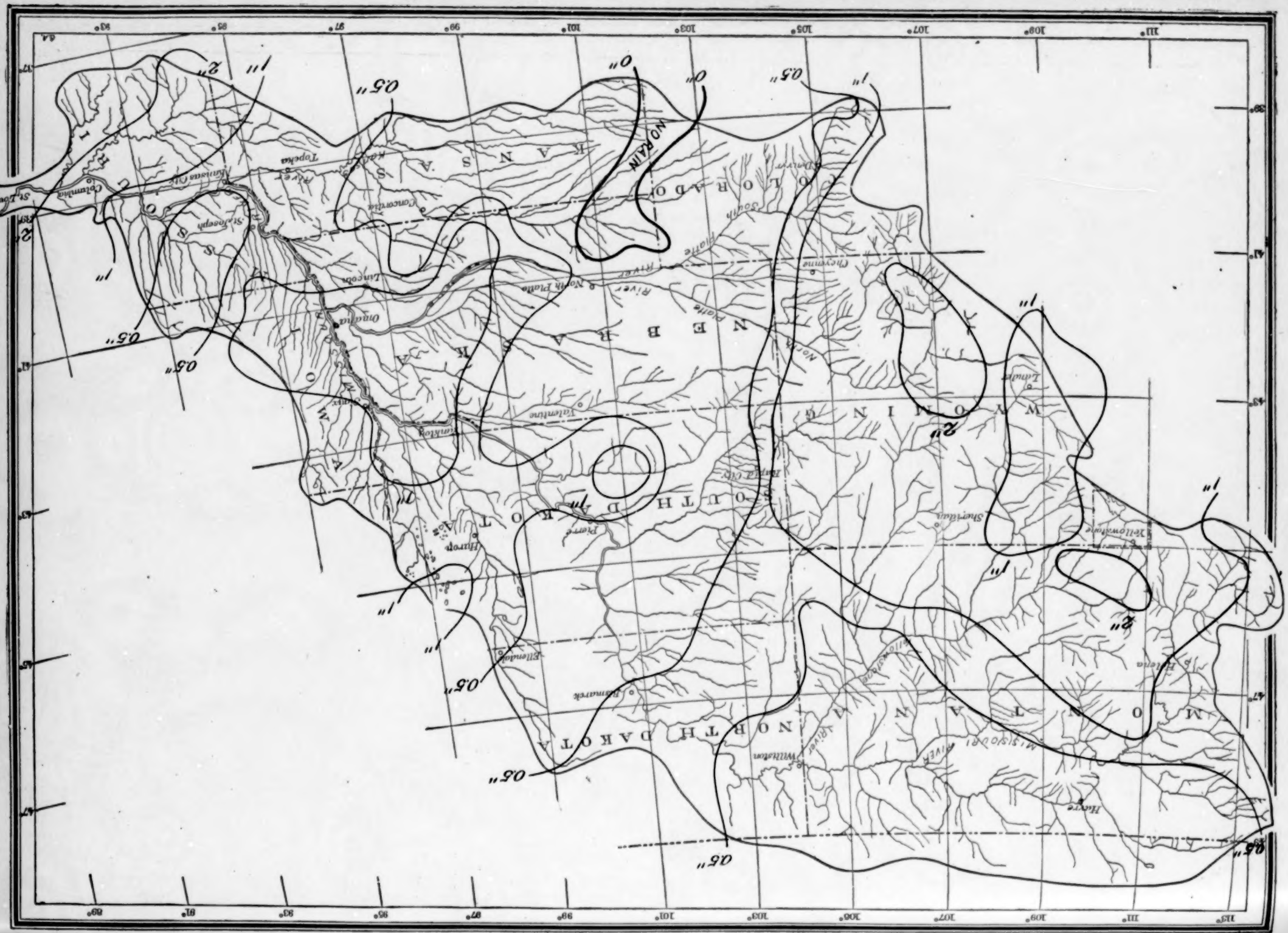


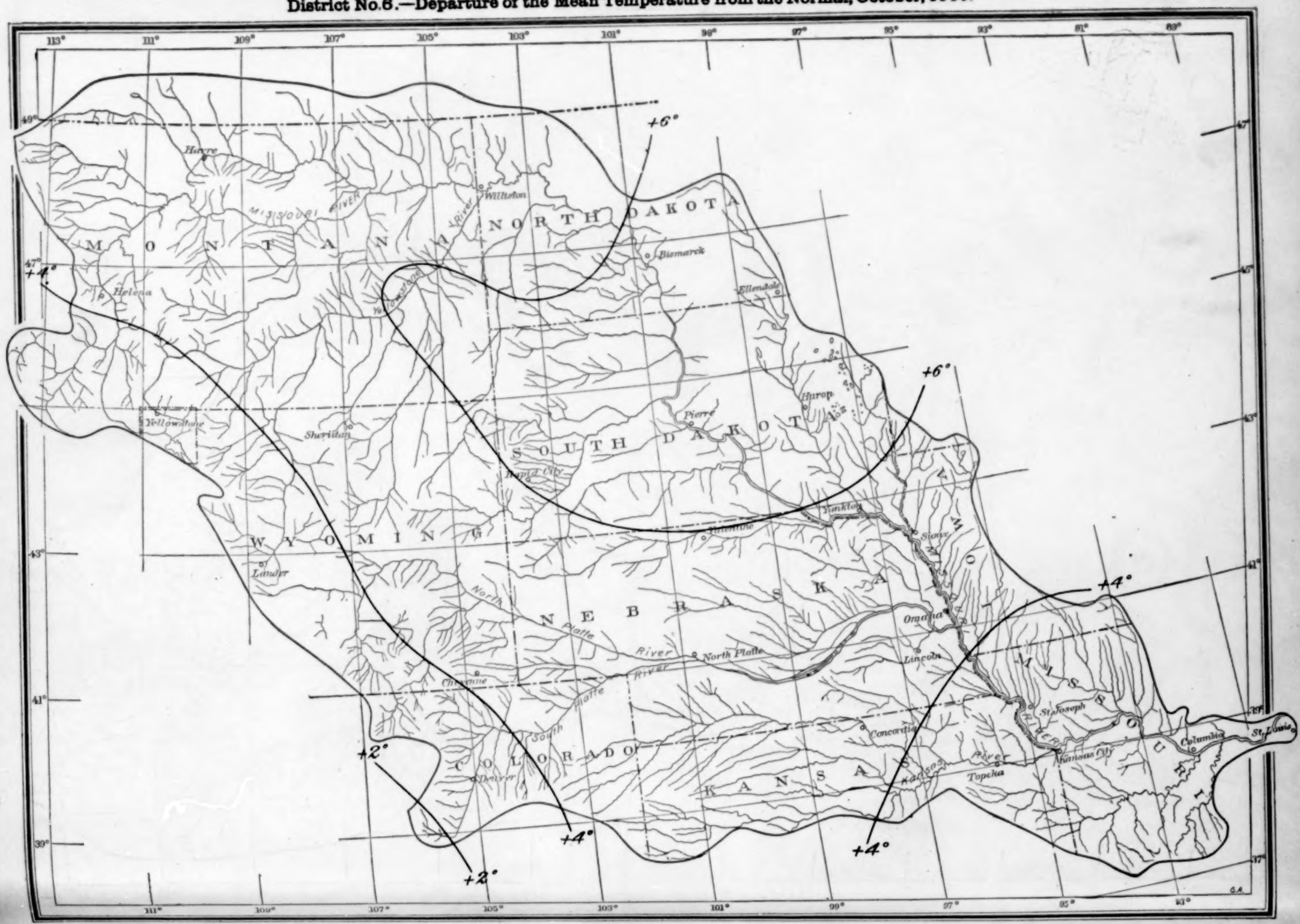
District No. 5.—Departure of the Mean Temperature from the Normal, October, 1910.

District No. 6.—Total Precipitation, October, 1910.



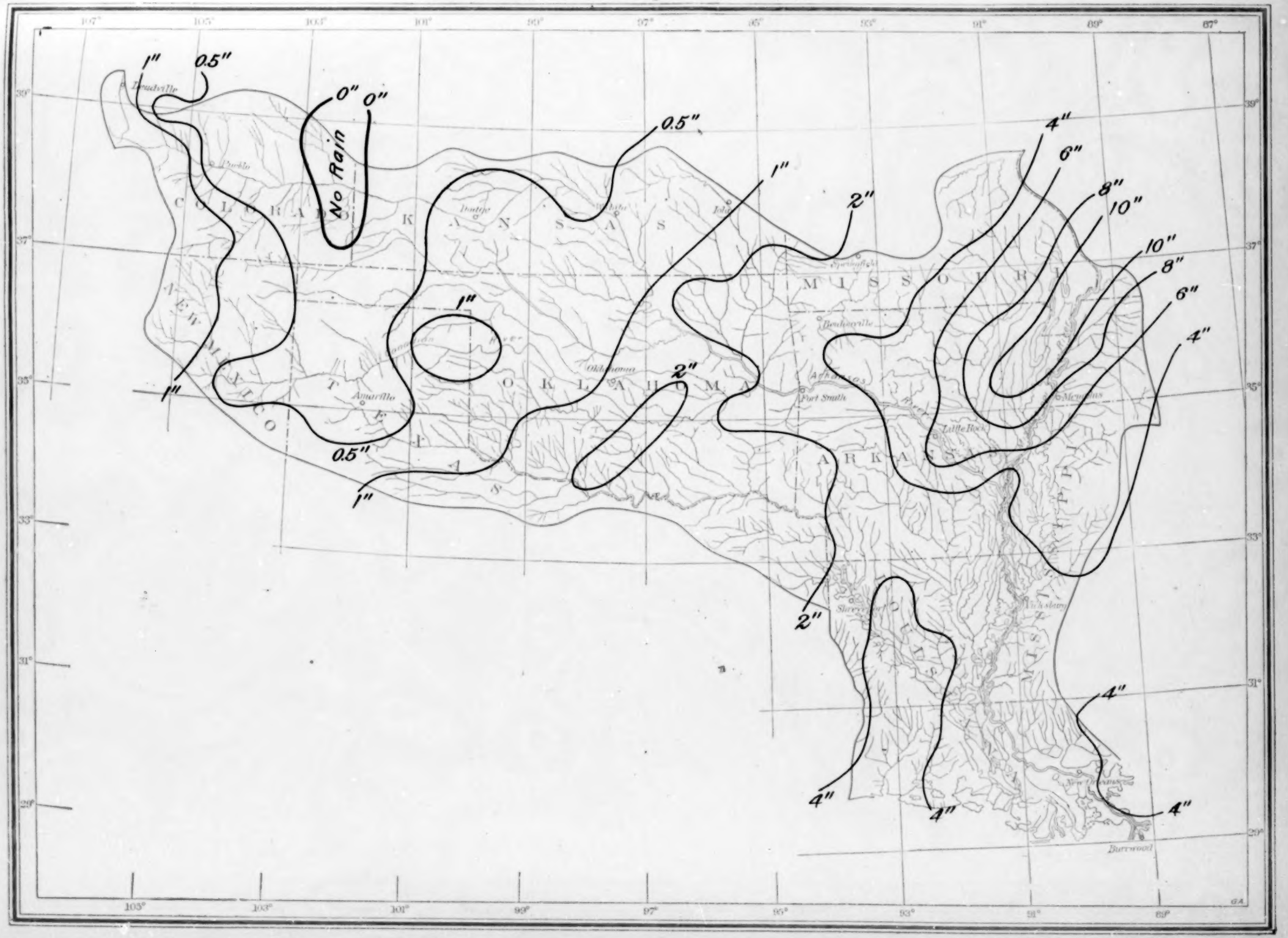
District No. 6.—Total Precipitation, October, 1910.

District No.6.—Departure of the Mean Temperature from the Normal, October, 1910.

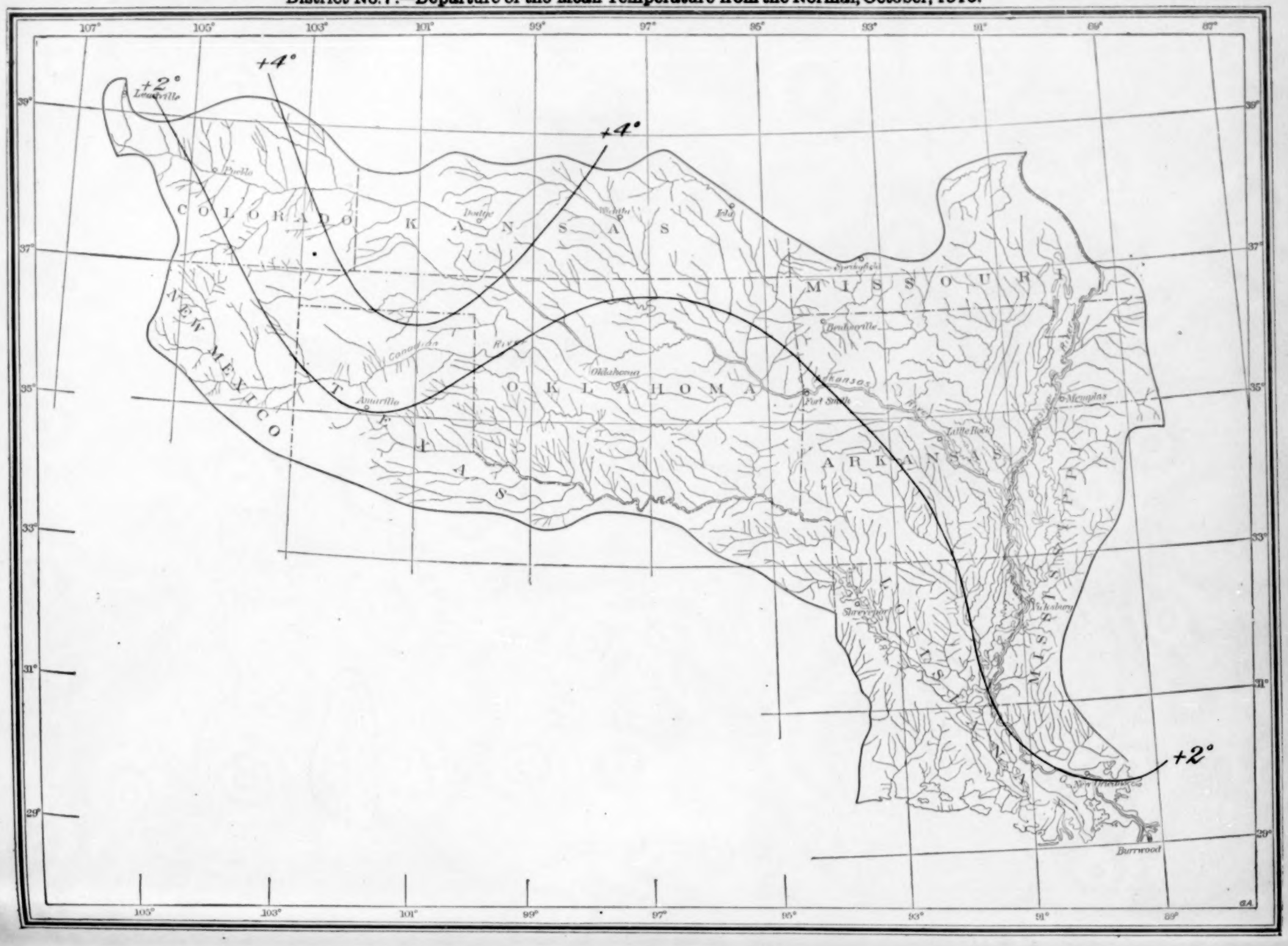


District No.7.—Total Precipitation, October, 1910.

District No. 7.—Total Precipitation, October, 1910.

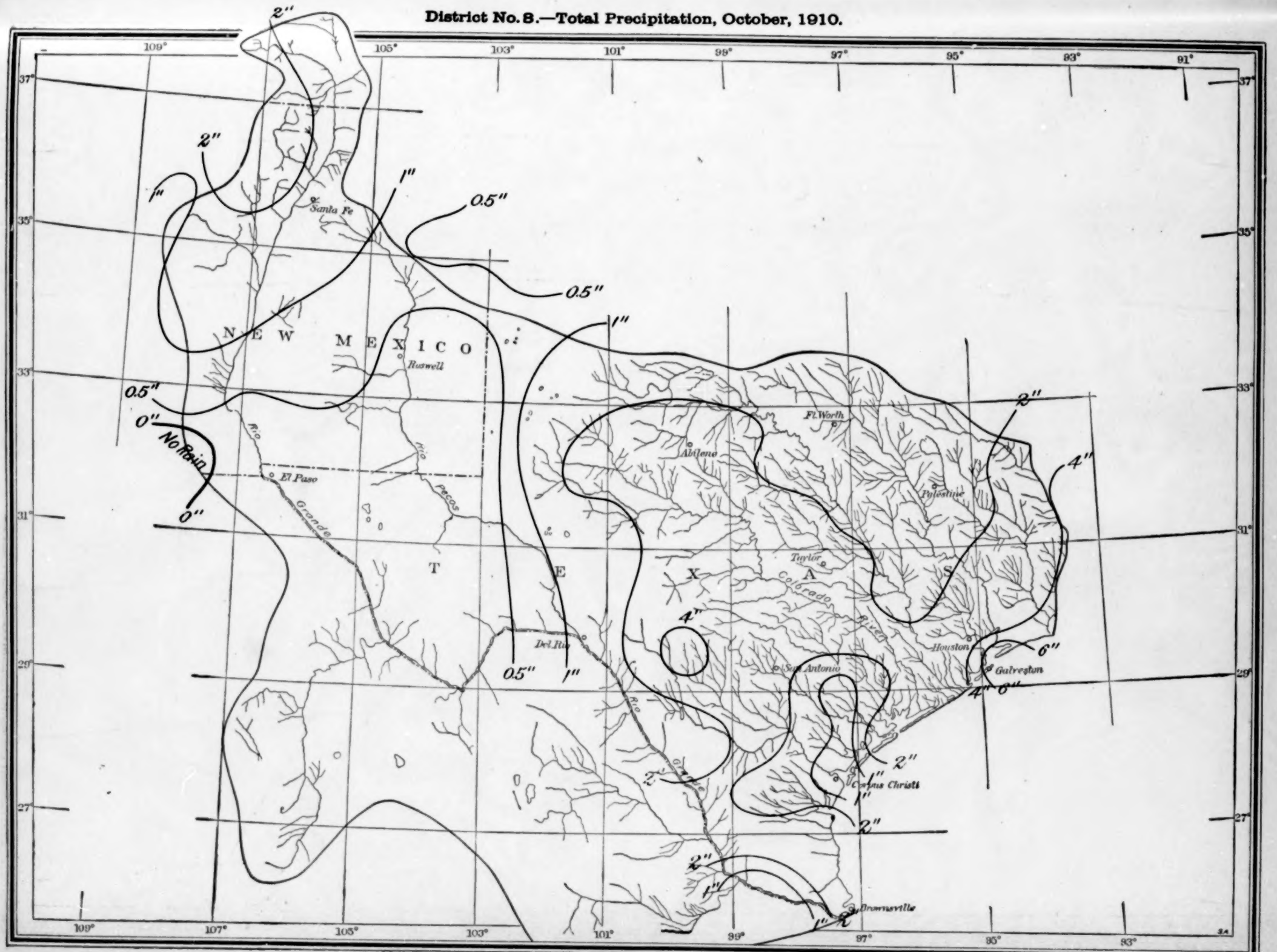


District No. 7.—Departure of the Mean Temperature from the Normal, October, 1910.

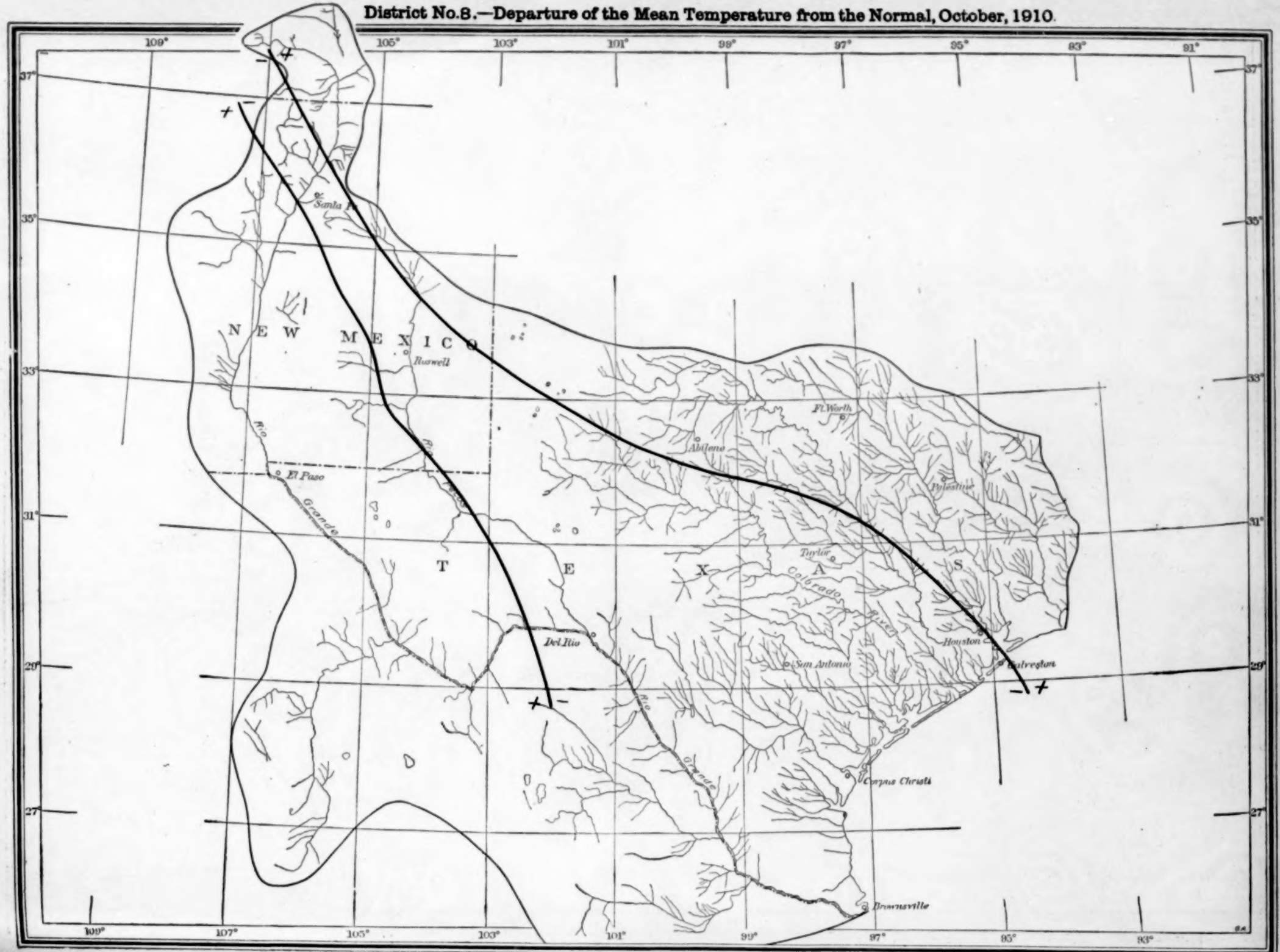


District No. 8.—Total Precipitation, October, 1910.

District No. 8.—Total Precipitation, October, 1910.



District No.8.—Departure of the Mean Temperature from the Normal, October, 1910.



District No. 9.—Total Precipitation, October, 1910.

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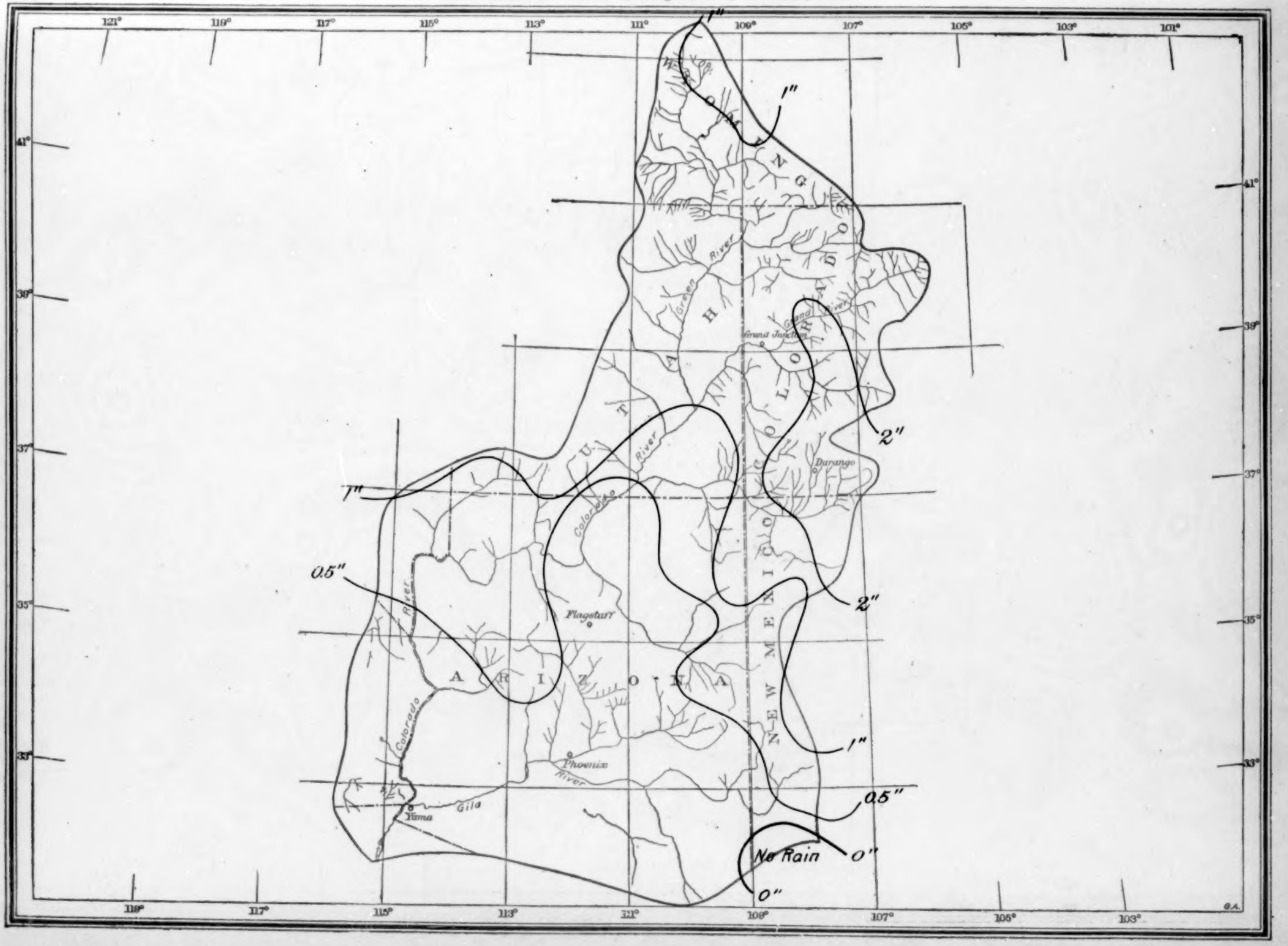
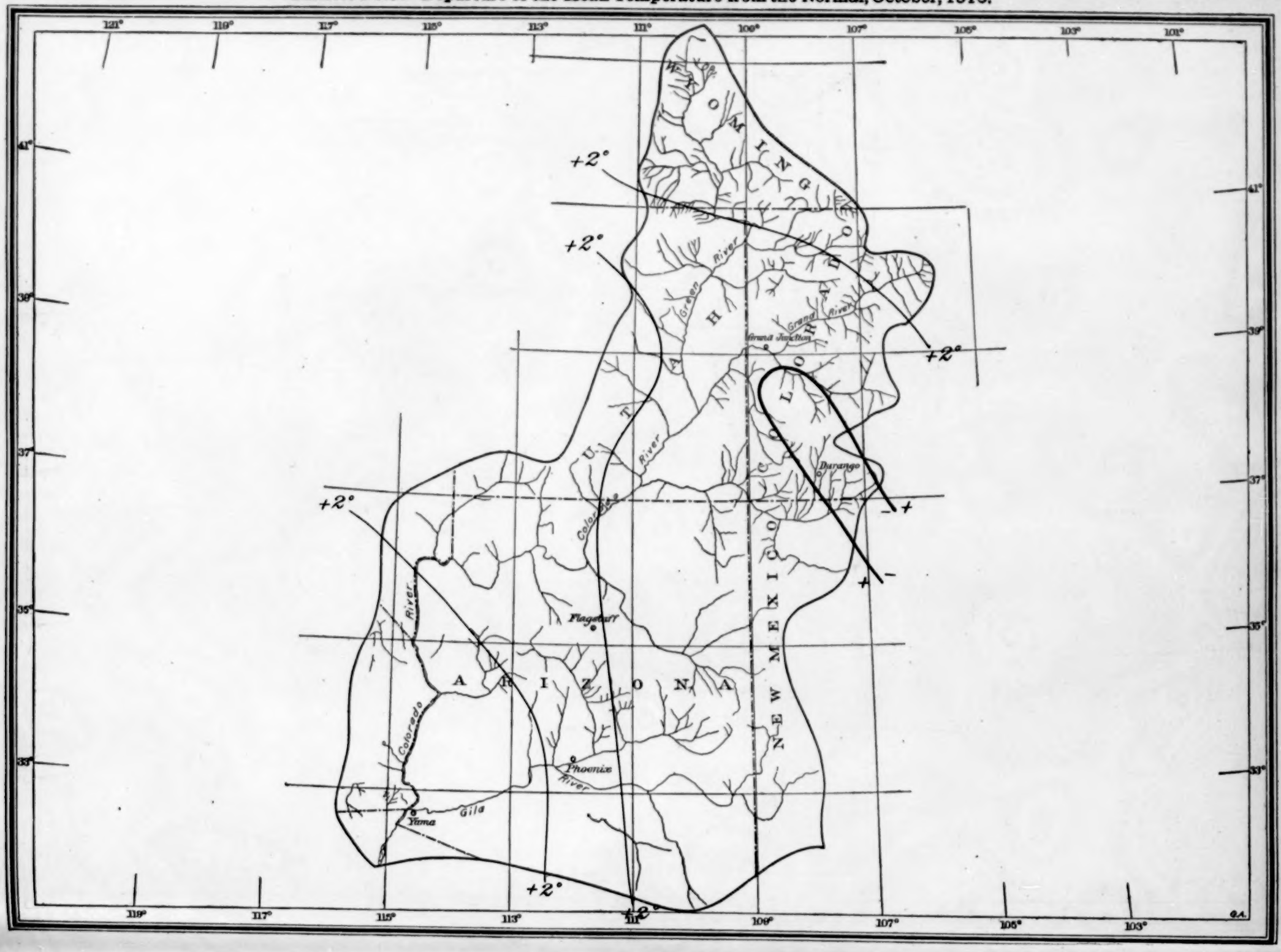
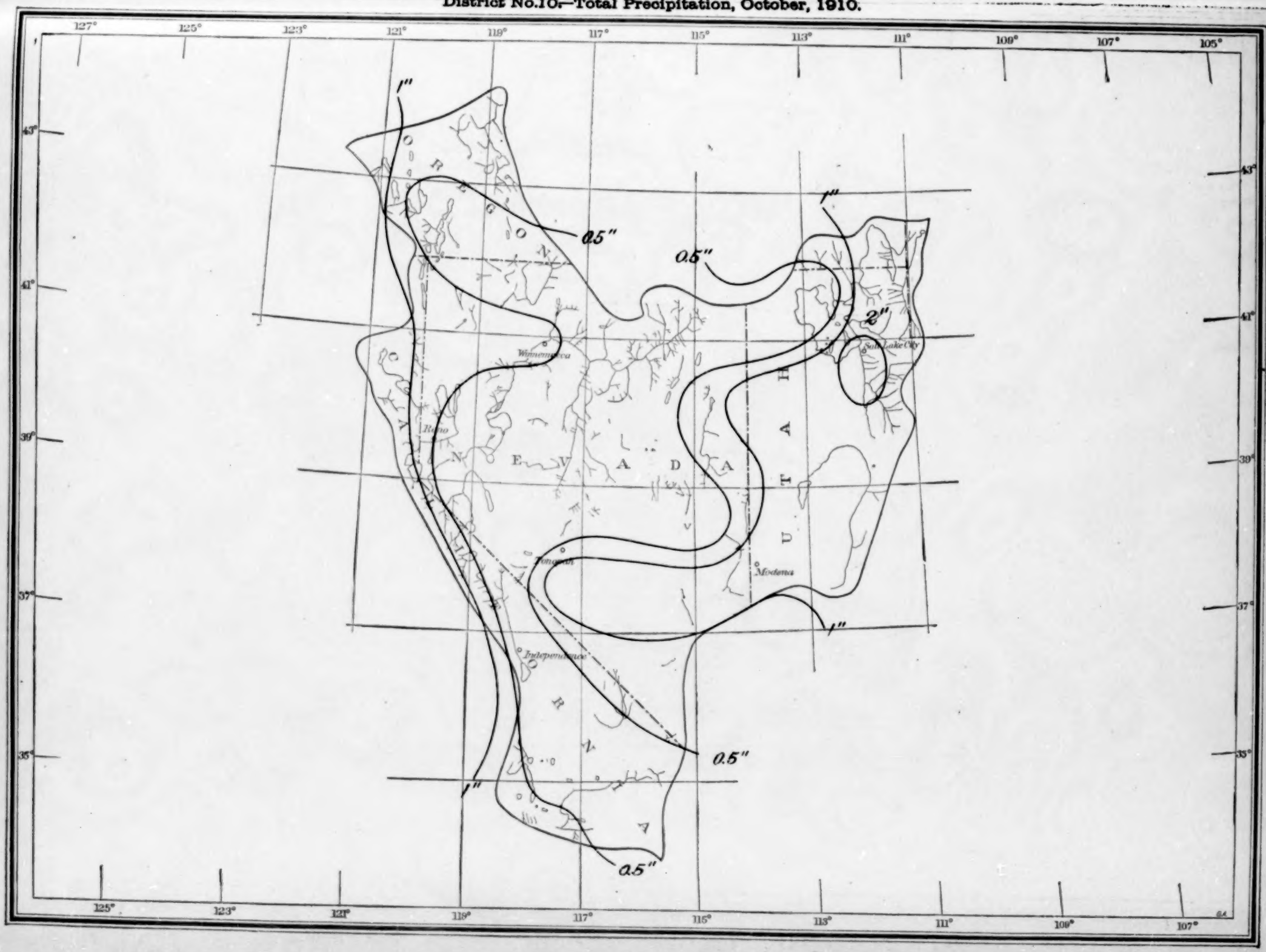


District No.9.—Departure of the Mean Temperature from the Normal, October, 1910.

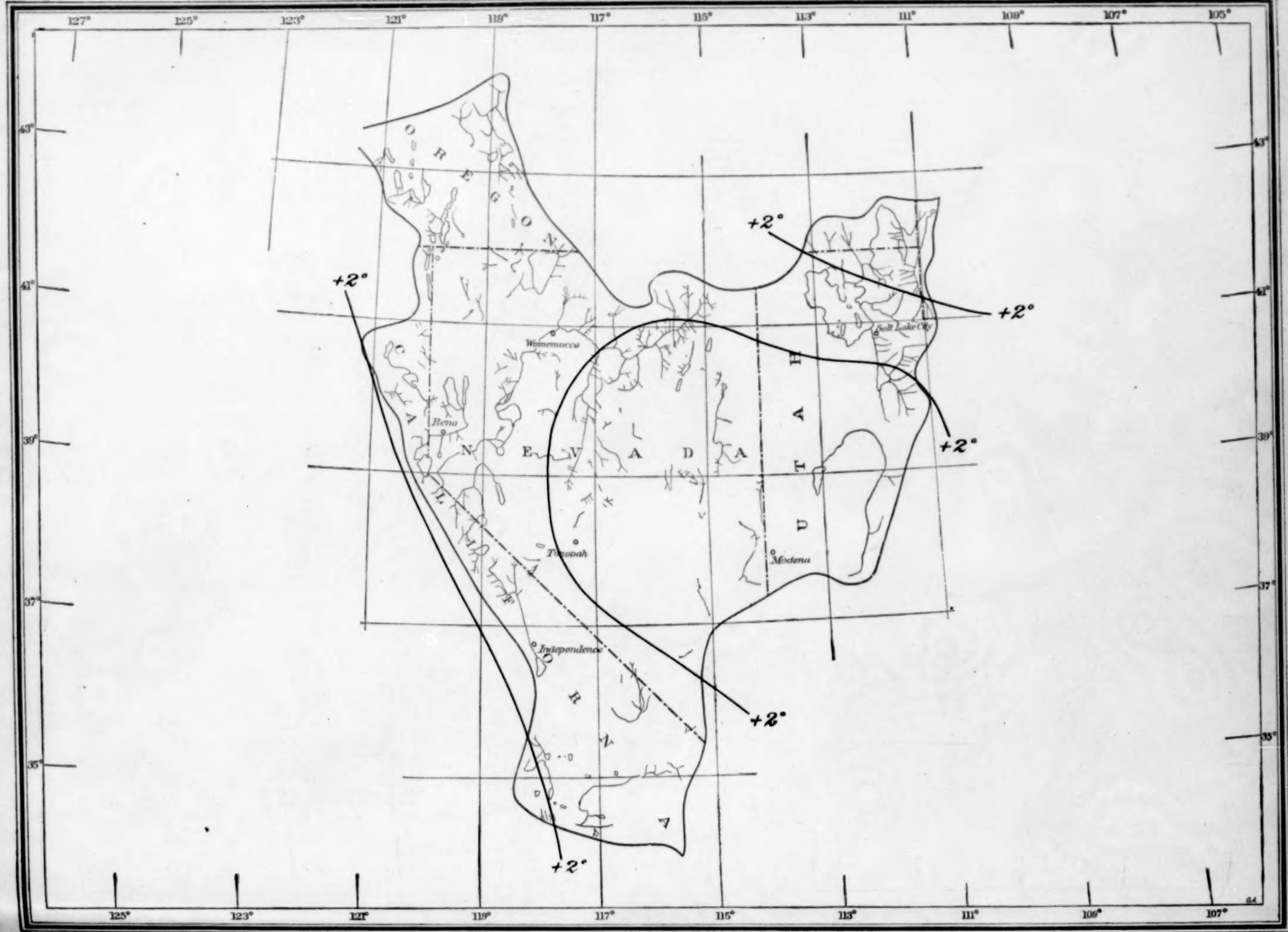


District No.10.—Total Precipitation, October, 1910.

District No.10.—Total Precipitation, October, 1910.

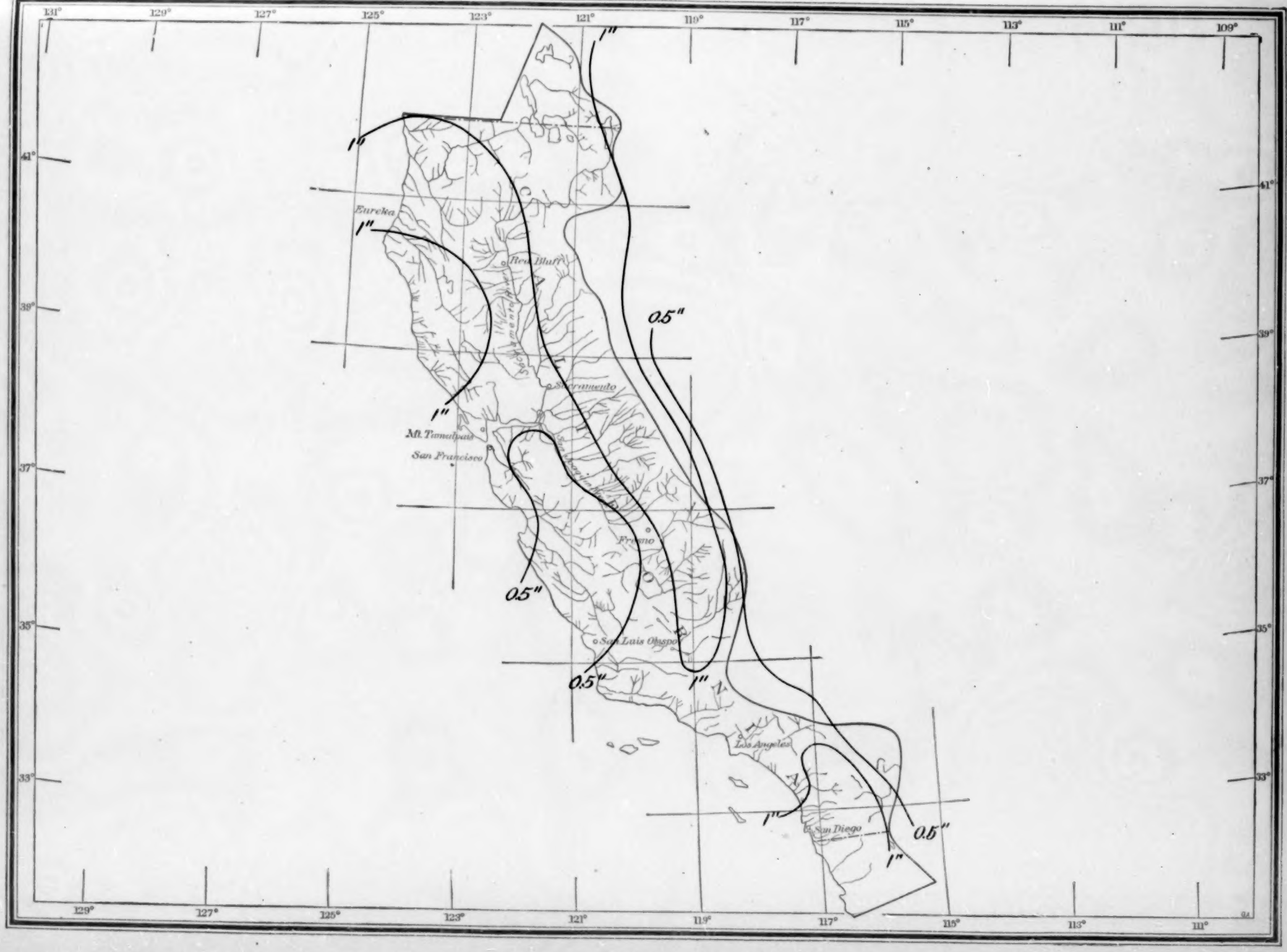


District No.10.–Departure of the Mean Temperature from the Normal, October, 1910.

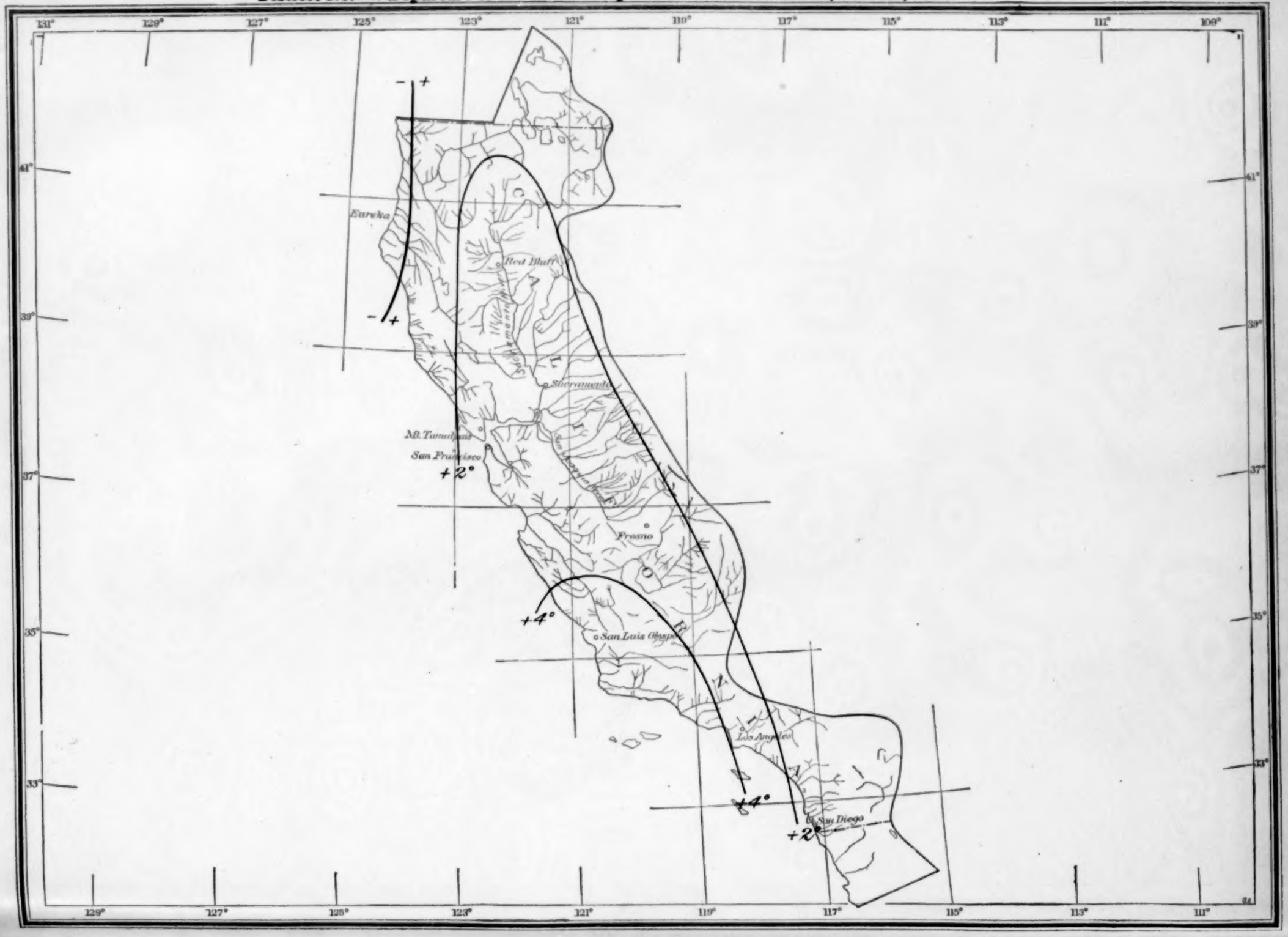


District No.11.–Total Precipitation, October, 1910.

District No. 11.—Total Precipitation, October, 1910.

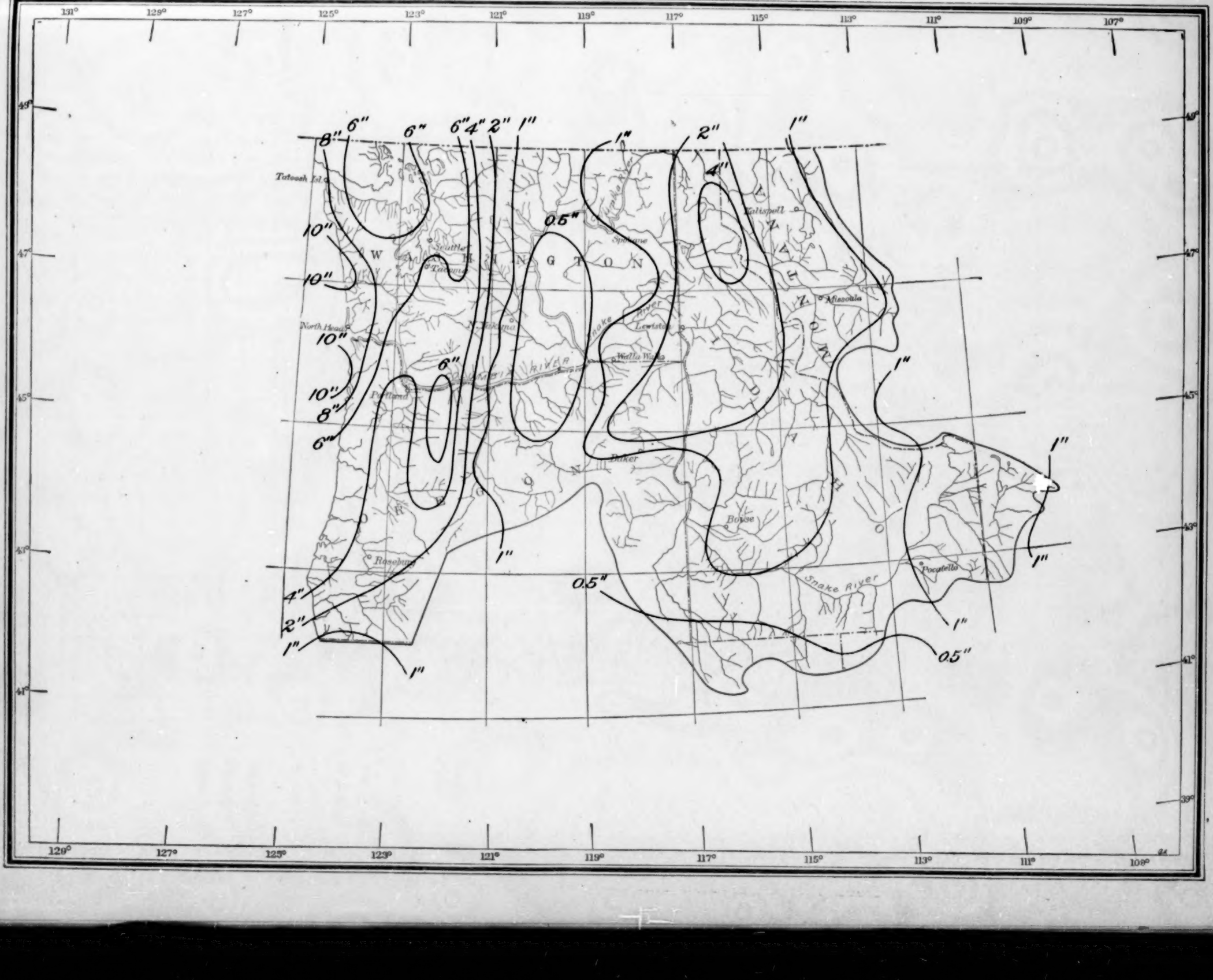


District No. 11.—Departure of the Mean Temperature from the Normal, October, 1910.



District No. 12.—Total Precipitation, October, 1910.

District No. 12.—Total Precipitation, October, 1910.



District No. 12.—Departure of the Mean Temperature from the Normal, October, 1910.

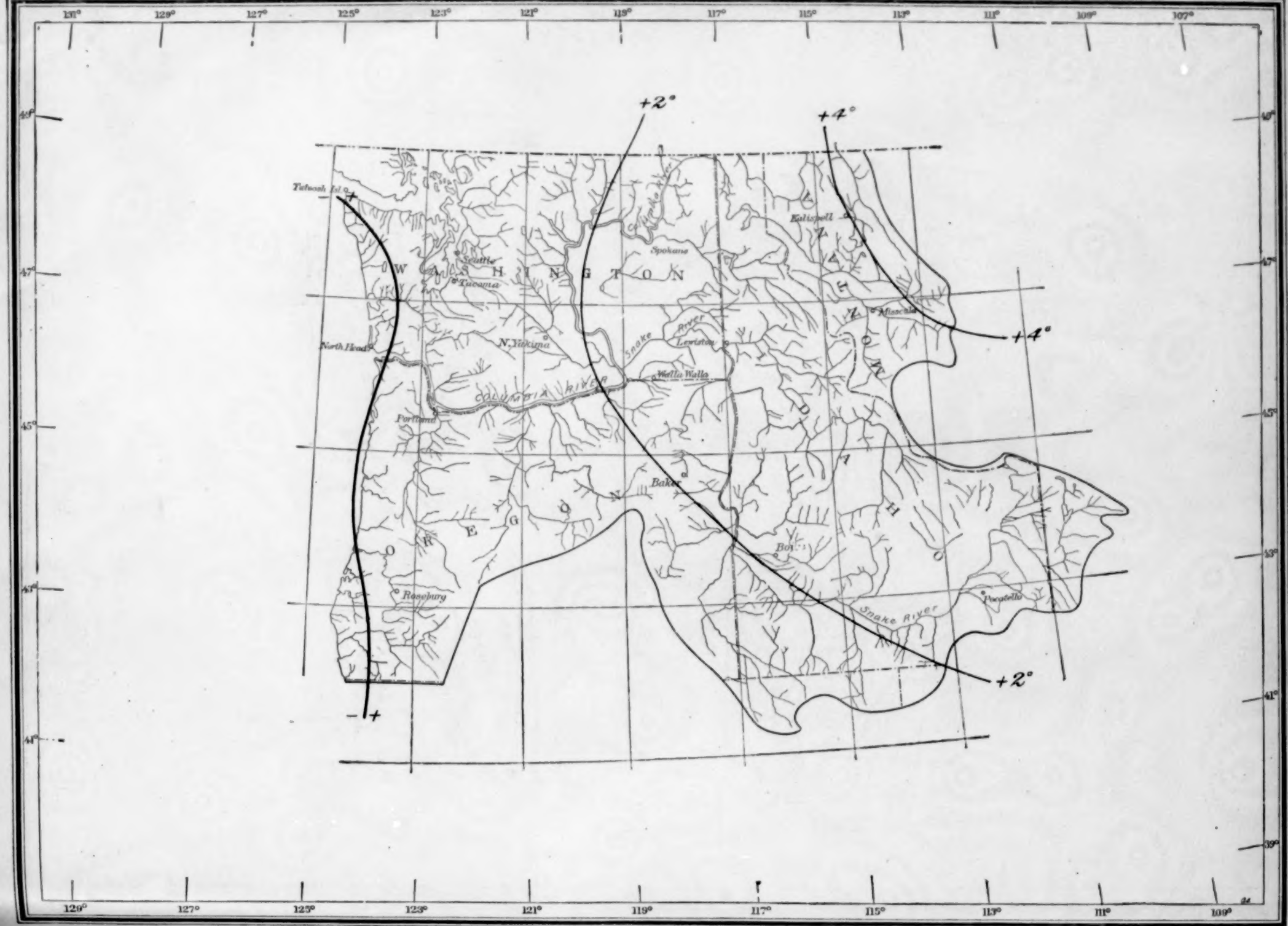


Chart I. Hydrographs of Several Principal Rivers, October, 1910.

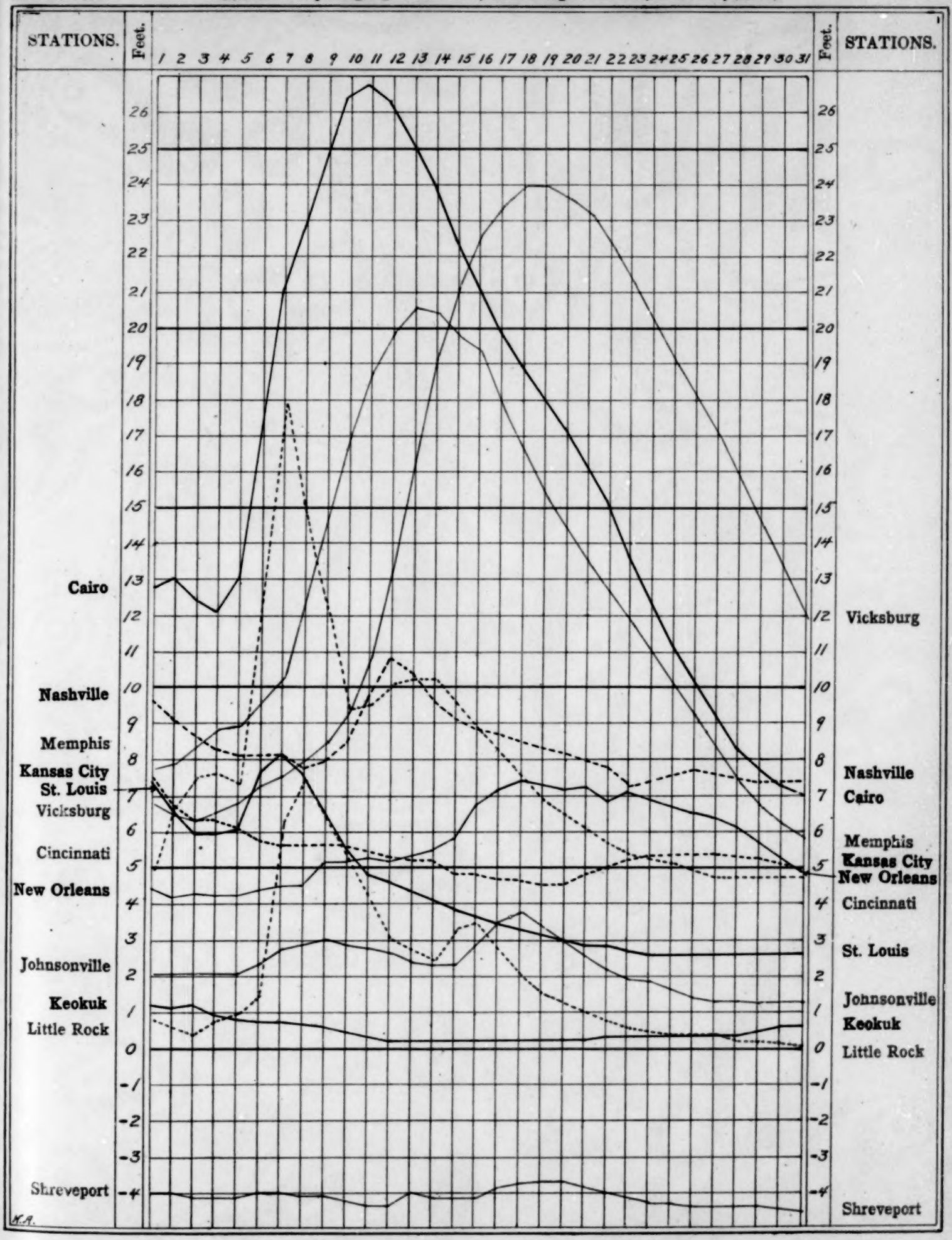


Chart II. Tracks of Centers of High Areas, October, 1910.

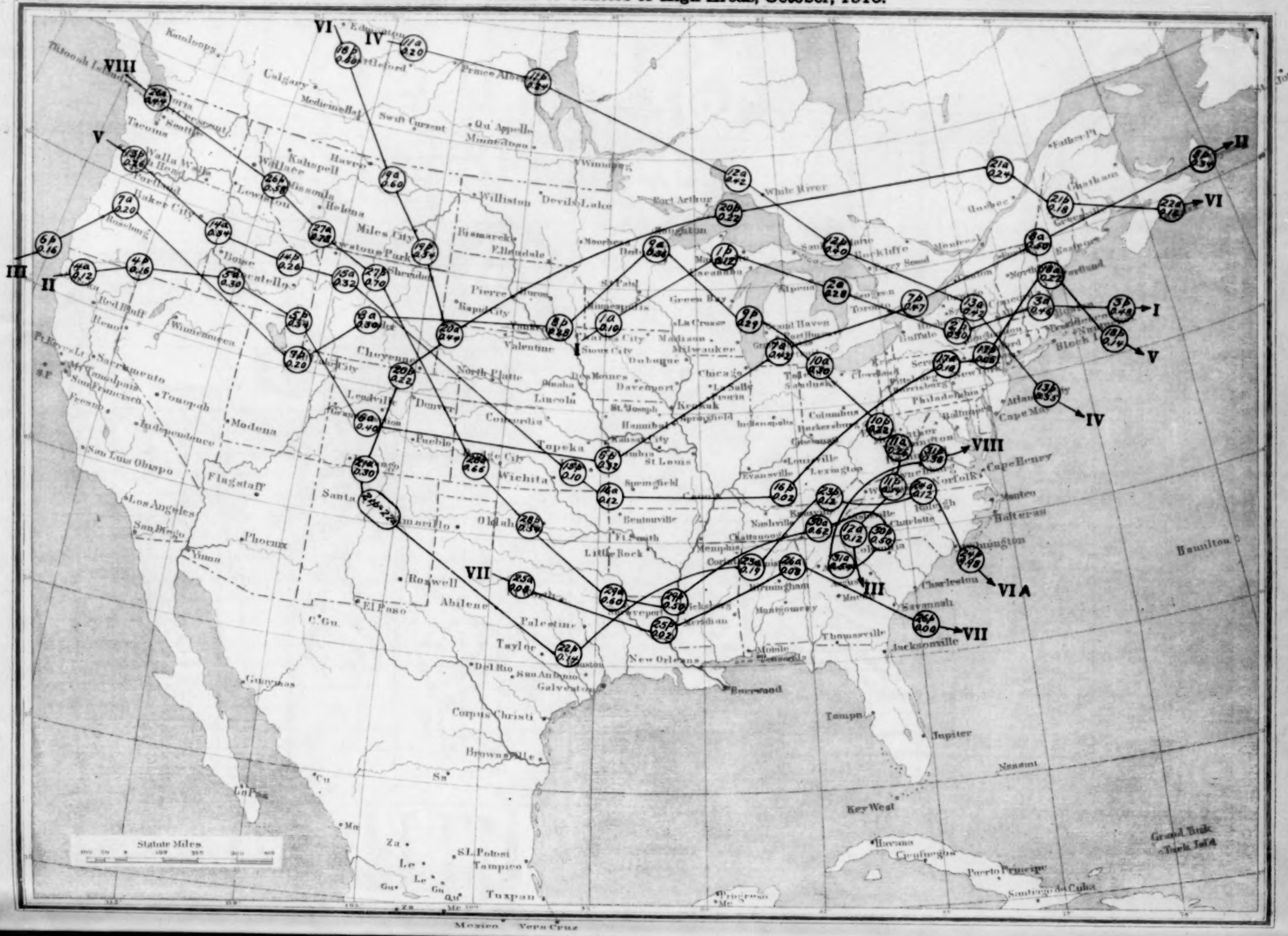


Chart III. Tracks of Centers of Low Areas, October, 1910.

Chart III. Tracks of Centers of Low Areas, October, 1910.

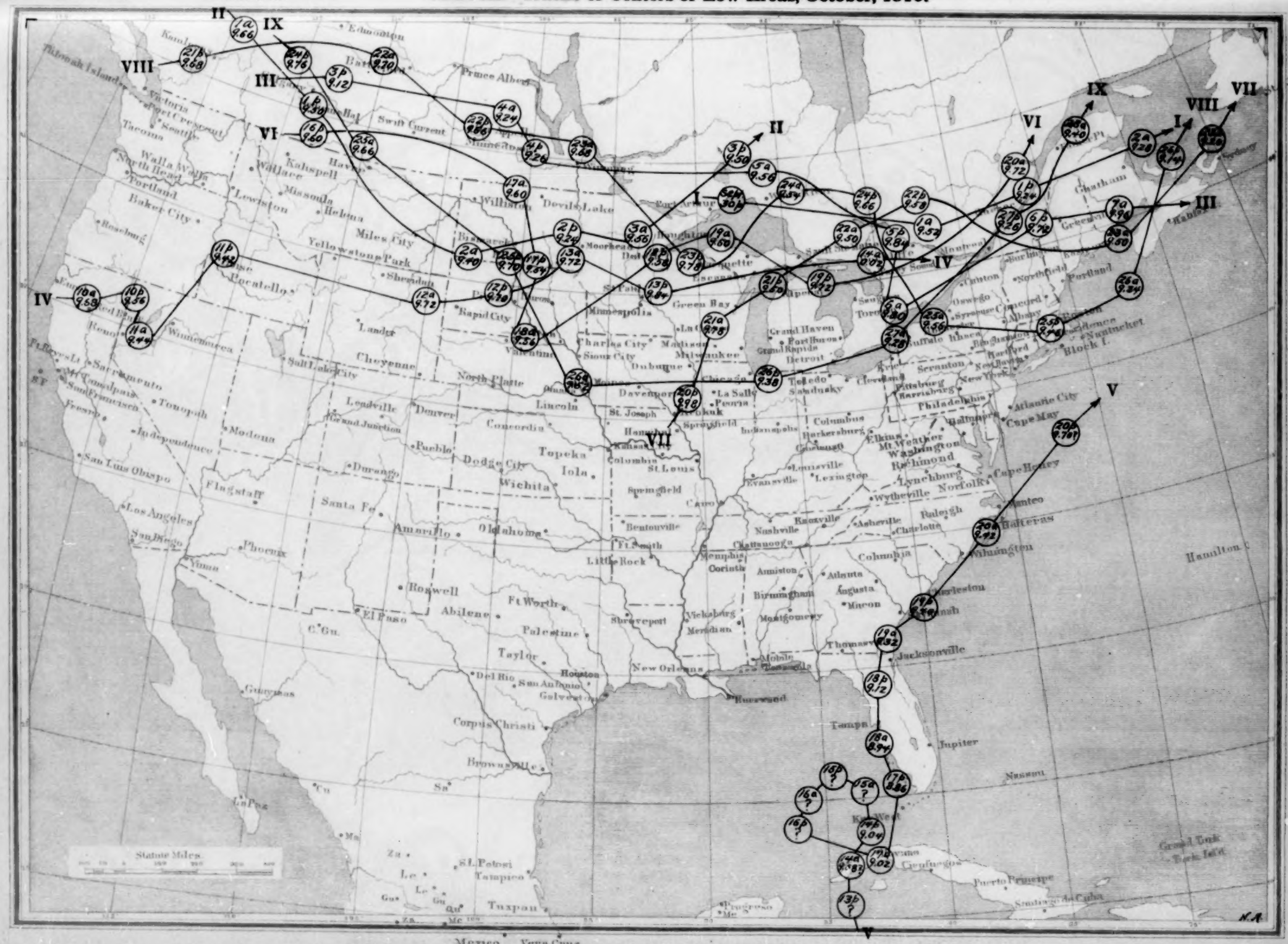


Chart IV. Departure of the Mean Temperature from the Normal, October, 1910.

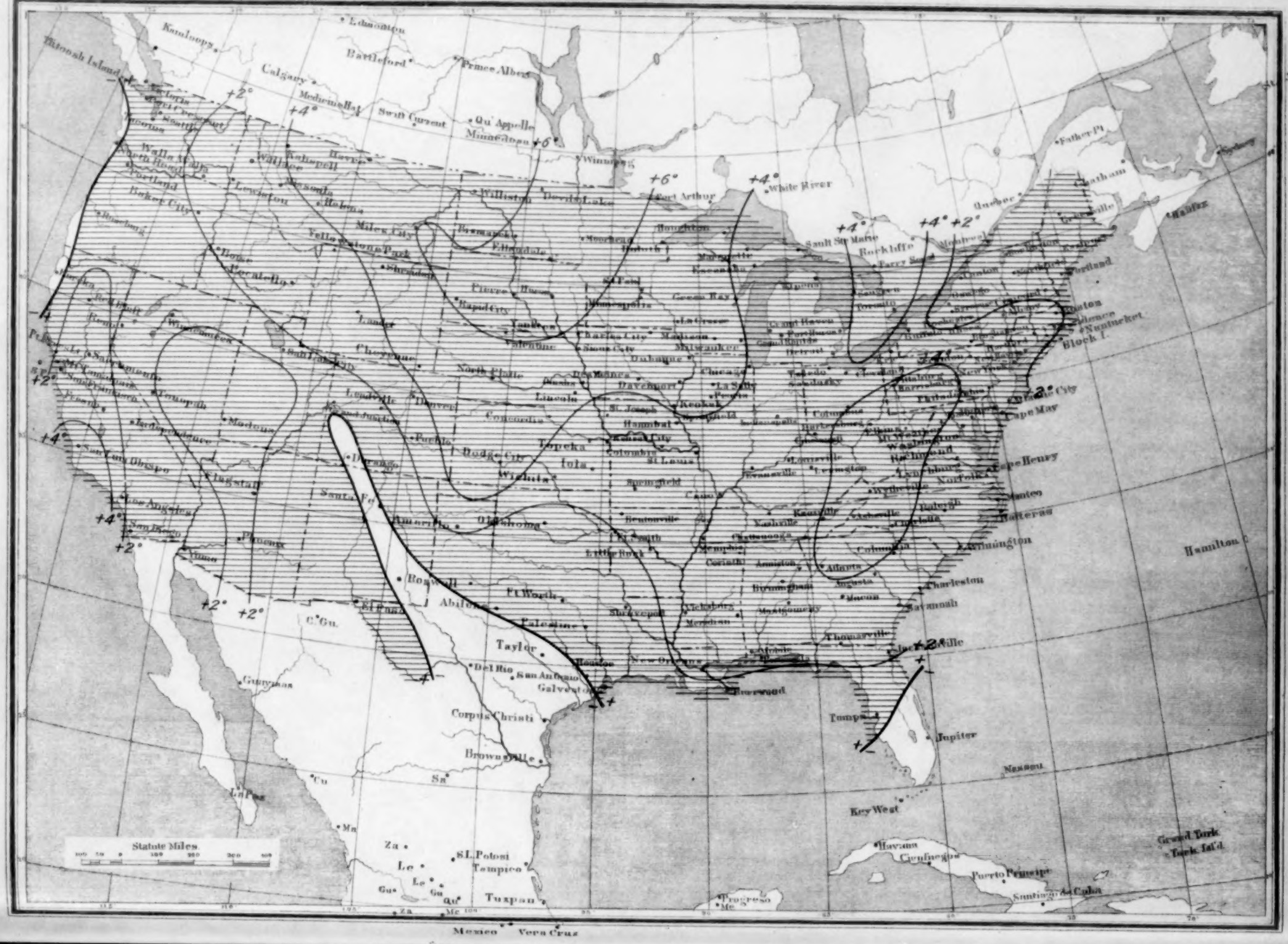


Chart V. Total Precipitation, October, 1910.

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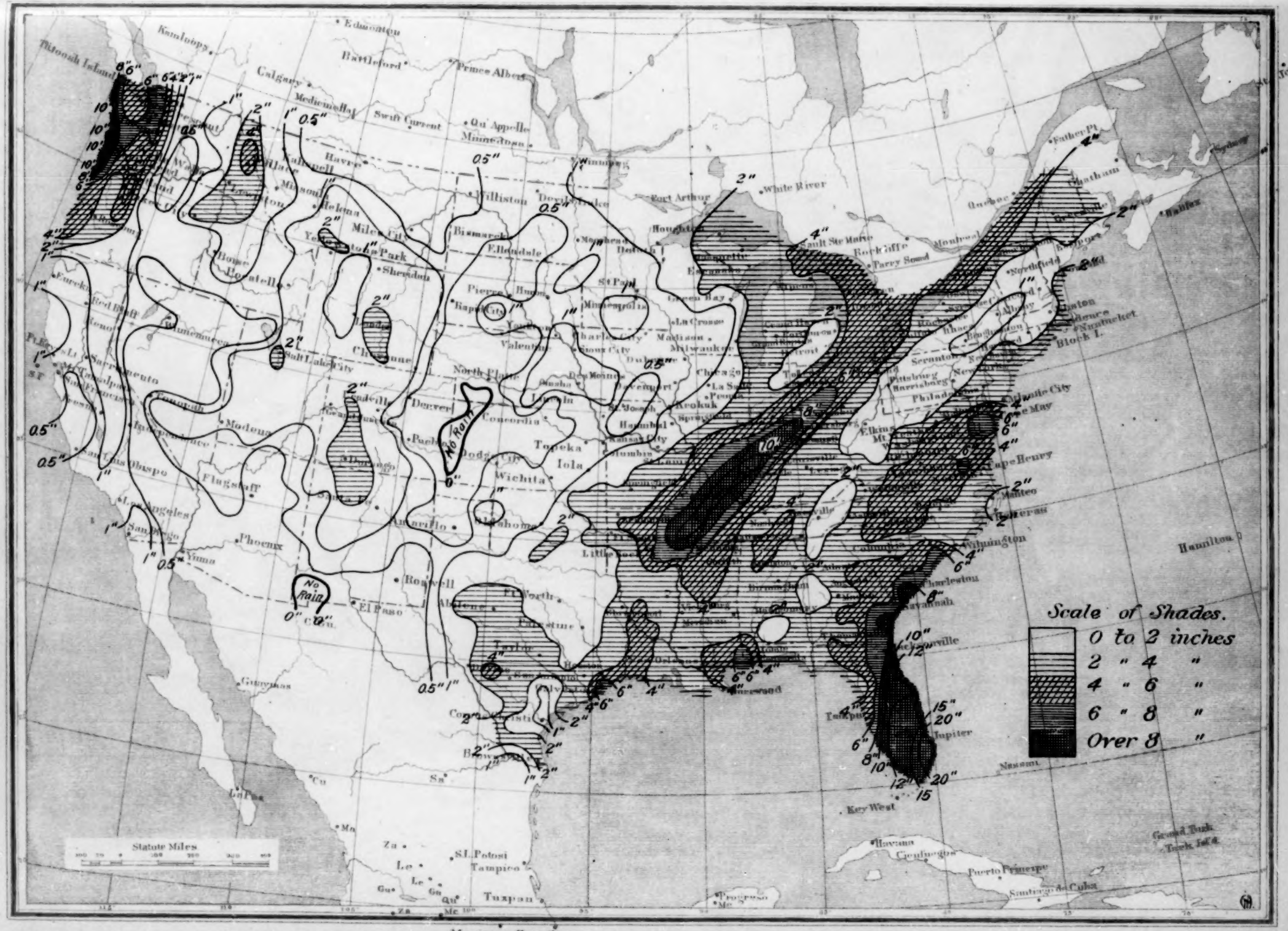

Chart VI. Percentage of Clear Sky between Sunrise and Sunset, October, 1910.

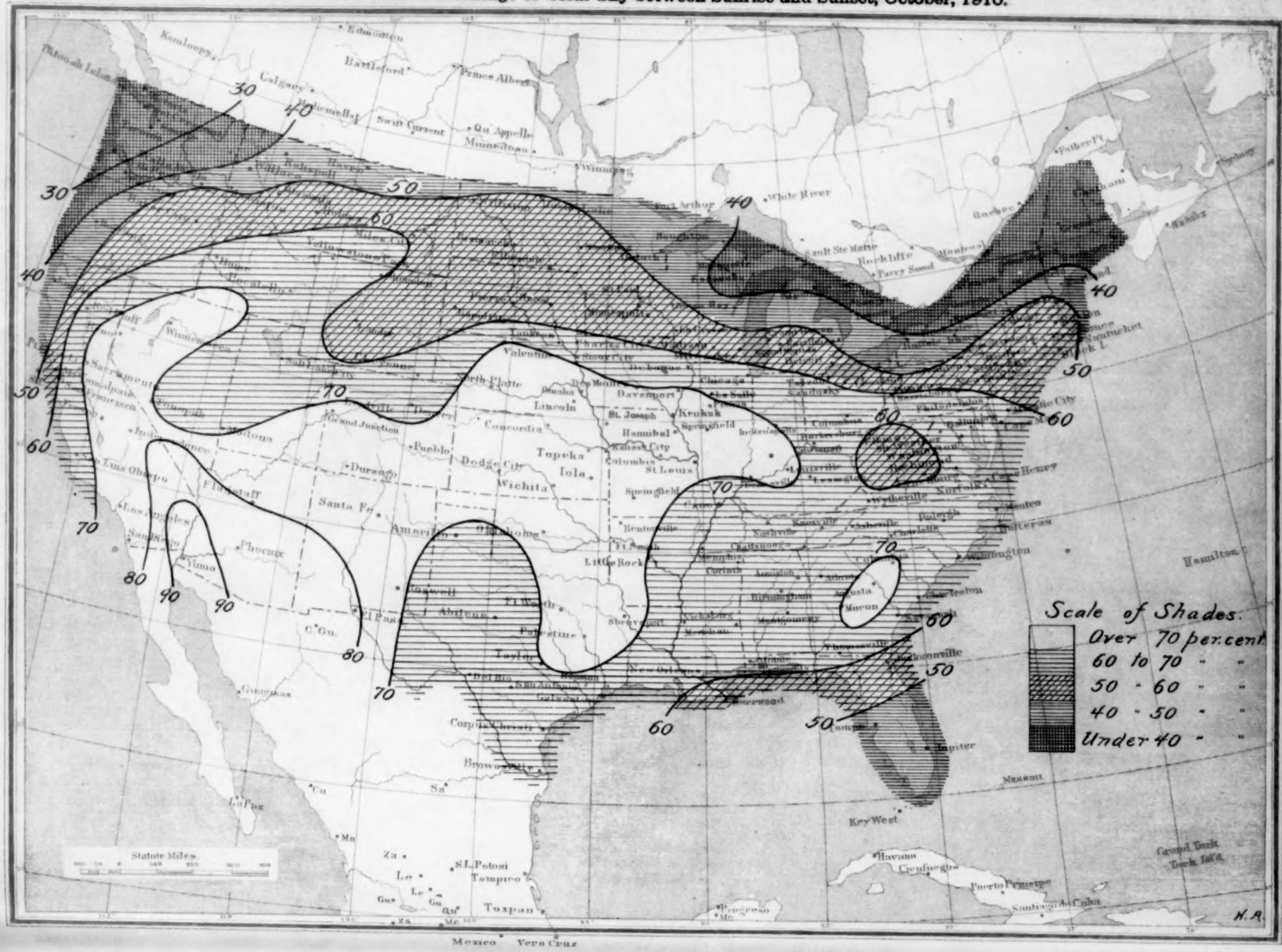

Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, October, 1910.
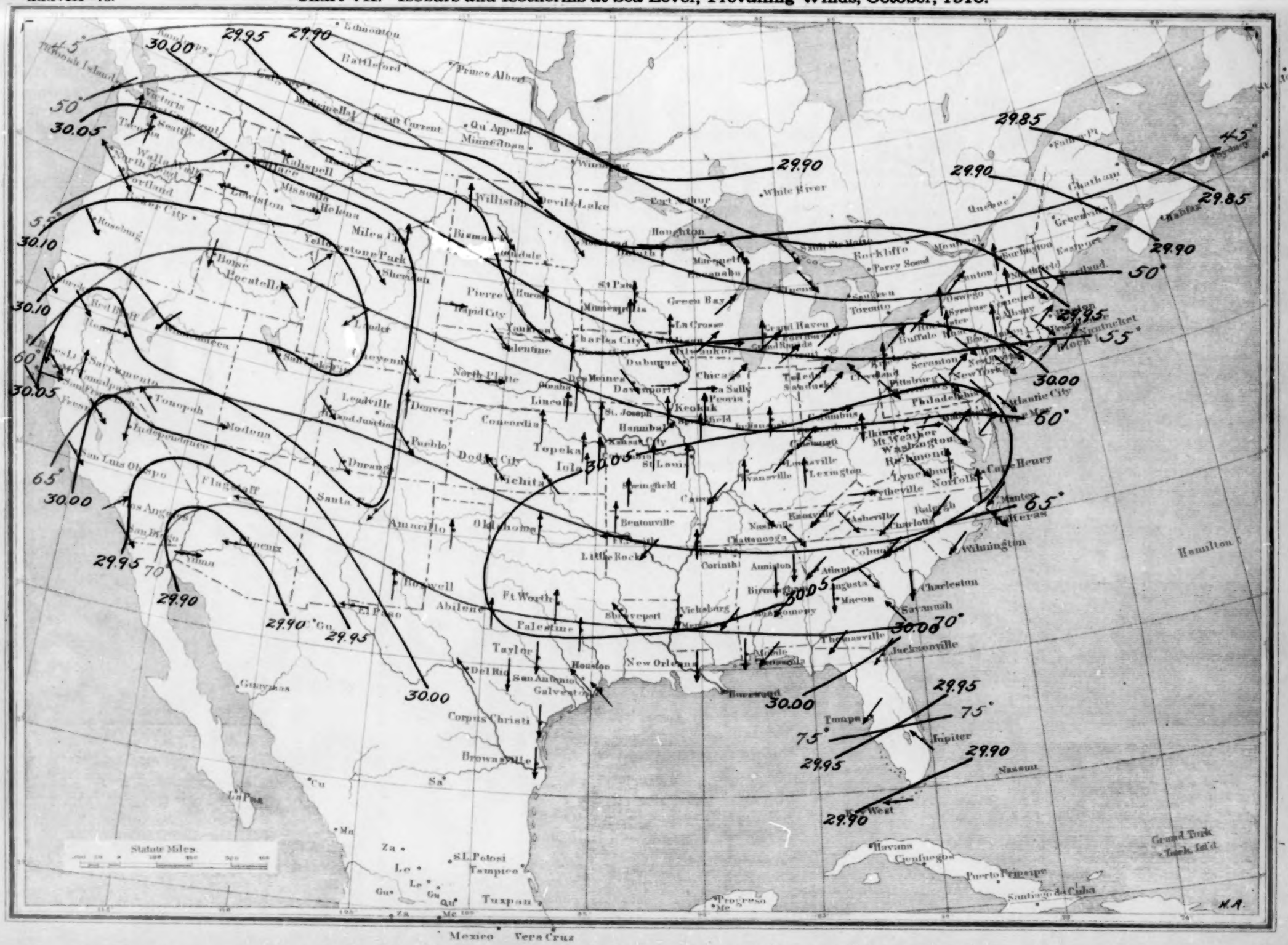
Chart VII. Isobars and Isotherms at Sea Level; Prevailing Winds, October, 1910.